JRC Scientific and Technical Reports

Scientific, Technical and Economic Committee for Fisheries (STECF)

Report of the SGRST-08-03 Working Group Fishing Effort Regime

1 – 5 SEPTEMBER, LYSEKIL, SWEDEN

Prepared in draft by SGRST-08-01: 2 -6 JUNE, ISPRA, ITALY

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SCIENTIFIC, TECHNICAL AND ECONOMIC COMMITTEE FOR FISHERIES (STECF)

STECF COMMENTS ON THE REPORT OF THE SGRST-08-03 WORKING GROUP REPORT

1 – 5 SEPTEMBER, LYSEKIL, SWEDEN

PREPARED IN DRAFT BY SGRST-08-01: 2 -6 JUNE, ISPRA, ITALY

STECF UNDERTOOK THE REVIEW DURING THE PLENARY MEETING

HELD IN BRUSSELS 3-7 NOVEMBER 2008

1. BACKGROUND:

STECF is requested to review the report of the **SGRST-08-03** of September 1-5, 2008 (Lysekil) meeting, evaluate the findings and make any appropriate comments and recommendations.

The working group was requested for:

1 – an assessment of fishing effort deployed by fisheries and métiers which are currently affected by fishing effort management schemes defined in Annex II to Regulation (EC) No 40/2008;

2 – an assessment of fishing effort deployed by fisheries and metiers, which will be affected by the extension of the cod recovery plan to the Celtic Sea.

2. TERMS OF REFERENCE:

1. To provide historical series, as far back in time as possible, according to each of the following fishing areas:

Areas covered by Annex IIA

a. Kattegat (ICES functional unit IIIaS),
b. (i) Skagerrak (ICES functional Unit IIIaN), (ii) North Sea (EC waters of ICES sub-area II and ICES sub-area IV), (iii) Eastern channel (ICES division VIId)
c. West of Scotland (ICES division VIa)
d. Irish Sea (ICES division VIIa)

Areas covered by Annex IIB

e. Atlantic waters of the Iberian Peninsula (ICES divisions VIIIc and IXa, excluding the Gulf of Cadiz)

Areas covered by Annex IIC

f. Western Channel (ICES division VIIe)

New areas related to the assessment request

g. Celtic Sea (total of ICES divisions VIIb, VIIc, VIIe, VIIf, VIIg, VIIh, VIIj and VIIk and total for the subset of ICES divisions VIIf and VIIg)

The data should also be broken down by

- ✓ Member State ;
- ✓ regulated gear type and by associated special conditions defined in Annex II as far as relevant ;
- ✓ unregulated gear types catching
    - o cod in fishing areas a, b(i), b(ii), b(iii), c, d and g;
    - o sole in fishing areas b(i), b(ii), b(iii) and f;
    - o plaice in fishing areas b(i), b(ii) and b(iii),
    - o hake and Norway lobster in fishing area e

for the following parameters:

a. Fishing effort, measured in kW.days and in GT.days and in number of vessels concerned

b. Catches (landings and discards provided separately) of

- ✓ cod, sole and plaice in areas covered by Annex IIA,
- ✓ hake and Norway lobster in areas covered by Annex IIB,
- ✓ sole in areas covered by Annex IIC,
- ✓ cod in the Celtic Sea,

by weight and by numbers at age.

c. Catches (landings and discards provided separately) of

- ✓ non-cod , non-sole and non-plaice in areas covered by Annex IIA,
- ✓ non-hake and non-Norway lobster in areas covered by Annex IIB,
- ✓ non-sole in areas covered by Annex IIC,
- ✓ non-cod in the Celtic sea catches (landings and discards)

by species, by weight and by numbers at age

d. Catch per unit effort (cpue) of

- ✓ cod, sole and plaice in areas covered by Annex IIA,
- ✓ hake and Norway lobster in areas covered by Annex IIB,
- ✓ sole in areas covered by Annex IIC,
- ✓ cod in the Celtic Sea.

2. Based on the information compiled under point (1) above, to rank gear types, with and without associated special conditions, on the basis of their contribution to catches expressed both in weight and in number of

- ✓ cod, sole and plaice in areas covered by Annex IIA,
- ✓ hake and Norway lobster in areas covered by Annex IIB,
- ✓ sole in areas covered by Annex IIC,
- ✓ cod in the Celtic Sea.

3. If relevant data are available, to comment on the quality of estimations on total catches and discards.

4. To assess the fishing effort and catches (landings and discards) of

- ✓ cod, sole and plaice in areas covered by Annex IIA,
- ✓ hake and Norway lobster in areas covered by Annex IIB,
- ✓ sole in areas covered by Annex IIC,
- ✓ cod in the Celtic sea

and associated species corresponding to vessels of length overall smaller than 10 metres in each fishery, by gear (corresponding to regulated and unregulated gear as defined in Annex II framework) and by Member State according to sampling plans implemented to estimate these parameters.

5. To describe the spatial distribution of the fishing effort deployed both in the Celtic Sea and in the context of Annexes IIA, IIB and IIC to Regulation (EC) No 41/20007, according to data reported in logbooks on the basis of ICES statistical rectangles, with the aim to determine to what extent fishing effort has moved from long distance to

coastal areas since the implementation of the days-at-sea regime for the first time in 2003 (Annex XVII to Regulation (EC) No 2341/2002).

6. Based on information compiled under point (1), on assessments done under point (2), (3), (4) and (5) and on the definition of métier adopted on level 6 of the matrix developed by the STECF-SGRN and STECF-SGECA Working Groups, to highlight métiers

- ✓ that are affected by rules defined in fishing effort regimes defined in Annex II for each of the areas a, b(i), b(ii), b(iii), c, d, e and f or
- ✓ that would be affected by a possible extension of the fishing effort (Annexe IIA) related to the cod recovery plan to the Celtic Sea.

In both cases and for each métier which will have been identified, it is requested to specify economic data which are already available or which should be requested to Member States to allow assessment of any change in fishing effort management schemes related to Annex II.

During this process, it is requested that that STECF-SGRST Working Group attempt

- ✓ to classify combinations of grouping of fishing gears and special conditions, as currently define in Annex II, according to the typology suggested by the STECF-SGRN.
- ✓ to notice
    - o when aggregations of combinations may be suggested (e.g. when such combinations cover a similar métier)
    - o when separation of combinations may be suggested (e.g. when such combinations cover two different métiers, or more).

3. STECF COMMENTS AND CONCLUSIONS

- STECF endorses the report of SGRST-08-03 and its findings and conclusions.
- STECF-SGRST has during its two meetings updated fleet specific effort and catch (including discard estimates where available) data up to 2007 and provides in this report, results based on an aggregation, which is consistent with the fleet/gear categories defined in Annexes IIA, IIB and IIC to Council Reg. 40/2008. This year data were received from more countries including Spain and preliminary discard rates from France.
- STECF considers that good progress was made by SGRST this year in collating data and preparing advice on the Celtic Sea.
- STECF considers that the overall effect has been an improvement in data quantity and detail provided on a wider range of metrics.
- STECF notes that the assignment of effort and catches according to derogations is based on best expert knowledge, data availability and methods used, and also reflects cooperation with the national control and enforcement

institutions. In view of the extensive databases created, some data inconsistencies may still exist.

- STECF notes that discard data are still incomplete from some member states and areas. STECF therefore recommends that care is exercised in the use of metrics in the report that involve catch data.

- STECF is unable to comment on the quality of the fleet specific estimates of total catches and discards, mainly due to lack of requested data quality parameters, i.e. numbers of discard samples, fish measured and aged.

- Detailed information on unregulated gears (gears not covered by Annexes IIA, IIB and IIC) was provided by SGRST for the first time. STECF notes that data queries concerning these gears were complex and suggests that if these data are to be used for management purposes in the near future, consultation with the SGRST chair and JRC database support is advised.

- STECF considers that it would be advantageous if closer alignment could be achieved between future effort management regime gear categories and the requirements and rationale of the new Data Collection Regulation. Some progress was made in examining the relationship between metiers and the effort categories as defined in Annexes IIA, B and C of Council Regulation 40/2008 (particularly in the Irish Sea and West of Scotland) and further work is needed.

- STECF supports the view that more permanent future support and maintenance of the STECF database is necessary. Given the repeated experience of late and inconsistent data reports received from Member States, STECF recommends that the task of European fleet-specific data compilations of effort and catch be better institutionalised and conducted on a routine basis. STECF welcomes the Commission's intent to provide support through JRC. STECF also recommends that the Commission take steps to discuss and agree the future arrangements for access to the database.

STECF/SGRST-08-03 WORKING GROUP REPORT

ON ASSESSMENT OF FISHING EFFORT REGIME

LYSEKIL, 1-5 SEPTEMBER 2008

PREPARED IN DRAFT BY SGRST-08-01: 2 -6 JUNE, ISPRA, ITALY

This report does not necessarily reflect the view of the European Commission and in no way anticipates the Commission's future policy in this area

4. SUMMARY

General remarks

- STECF- SGRST was given an extensive list of TORs to tackle. Good progress was made with most of these although TOR 3 concerning catch data quality was not addressed and preliminary work was conducted on TOR 6.
- STECF-SGRST has during its two meetings updated fleet specific effort and catch (including discard estimates where available) data up to 2007 and provides in this report results based on an aggregation which is consistent with the fleet/gear defined in Annexes IIA, IIB and IIC to Council Reg. 40/2008. This year data were received from more countries including Spain and preliminary discard rates from France. The overall effect was for greater detail and data provided on a wider range of metrics.
- STECF-SGRST was this year asked to collate data and advise on the Celtic Sea and completed a detailed new section in the report.
- STECF-SGRST notes that assignment of derogations is based on best expert knowledge, data availability, and methods used which also reflects cooperation with the national control and enforcement institutions. Specific data errors may exist regarding the extensive data bases and the special knowledge required when dealing with them.
- STECF-SGRST notes that there have been no requests to evaluate national proposals for fleet aggregations.
- STECF-SGRST remains in a poor situation regarding the description of the quality of the fleet specific estimates of total catches and discards, mainly due to lack of requested data quality parameters, i.e. number of discard samples, fish measured and aged.
- STECF-SGRST considers that it would be advantageous if there was closer alignment between the effort management regime and the requirements and rational of the new Data Collection Regulation. Some progress was made in examining the relationship between metiers and the effort categories (particularly in the Irish Sea and West of Scotland) and further work is needed so that appropriate alignment of the schemes can be developed or a basic list of data requirements can be drawn up. Such rationalisations would improve evaluation of fleet effort regulations.
- STECF SGRST had lengthy discussions about future support and maintenance of the STECF database . Given the repeated experience of late and inconsistent data reports received from Member States, STECF-SGRST reiterates its recommendation that the task of European fleet specific data compilations of effort and catch be better institutionalised and conducted on a routine basis. The group favoured an option which retained the responsibility in JRC but with a more transparent and long term sustainable support structure. There was widespread acknowledgemnt of the value of the database and its potential use in other forums is well recognised.

Review of Annex IIA of Council Reg. 40/2008 in the context of the cod recovery plan (Regulation 423/2004):

- STECF-SGRST notes a high consistency between the updated fleet specific effort and catch data provided in 2008 and the historic information provided in previous years.
- STECF-SGRST notes that the majority of the defined derogations of the management areas remain poorly used. Contrarily, the mixed fishery strategies which lack specific provisions for avoiding cod, plaice or sole catches dominate.
- STECF-SGRST notes that cod avoiding derogations generally contribute low amounts to overall cod catches and are characterised by lower catch rates of cod.
- STECF-SGRST estimated further effort reductions from 2006 to 2007 in most areas regarding most of the cod, plaice and sole sensitive derogations, particularly trawl gears and gill netters. West of Scotland effort appears to have stabilised
- Unregulated gears and under 10m gears make catches of cod, plaice and sole which vary in their significance to overall catches depending on area. For example in the west of Scotland and Irish Sea catches of cod by these groups are small, while in the Kattegat and in the Skagerrak,North Sea, Eastern Channel they are more significant (accounting for up to about 20%).
- STECF-SGRST continues to observe a high constancy in the catch compositions of the fleets defined in Annex IIA.
- STECF-SGRST notes increased discards of 2 year old cod in 2007 (year class 2005) in the Skagerrak, in the North Sea and to the West of Scotland by the majority of cod sensitive gears.
- STECF-SGRST reiterates its statement that not all areas occupied by the western European cod stocks are covered by the effort regulation in Council Reg. 40/2008 Annex IIA and its recommendation, that all of the areas occupied by the western European cod stocks should be effectively covered by the cod recovery plan and its associated effort measures.
- STECF-SGRST provided much more extensive information on spatial developments in the use of different gears and it is possible to see changes occurring over the time series in a numer of areas and gears. The patterns are often gear specific and variously reflect different member state fisheries, abundance changes of target stocks, economic considerations and effort regulations. In general large scale changes in spatial distribution are not obvious in the time period observed.

Review of Annex IIB of Council Reg. 40/2008 in the context of the recovery plan for Southern hake and *Nephrops* (Regulation 2166/2005)

- STECF-SGRST notes that there were improvements in fleet specific effort and catch data for Annex IIB with the provision of data from Spain. These data were only provided, however, for trips landing hake. Some inconsistent mesh information and data aggregations prevent a precise review of the effects of the defined derogations, nevertheless a more complete picture is emerging.

- Among the regulated gears, bottom trawls contribute the most effort and account for about 57% of hake landings made by regulated gears. Clear trends in the development of effort are not apparent.
- STECF-SGRST notes that the non-regulated gears and gears lacking information have, on average, accounted for over 50% of effort. trammel nets, account for about 5%. The unregulated gears contribute 76% of the overall hake landings but only 4% is taken by trammel nets.

Review of Annex IIC of Council Reg. 40/2008 in the context of the recovery of Western Channel sole (proposal COM (2003) 819 final)

- STECF-SGRST notes that with the exception of discard data there have been significant improvements in the provision of data from member states and the requested fleet specific effort data is now regarded as complete. The lack of discard data continues to impair the estimation of catches and some inconsistent data aggregations prevents a precise review of the effects of the defined derogations.
- STECF-SGRST notes that there are no indications of effort reductions in terms of kW*days, GT*days or number of vessels regarding the sole sensitive derogations.
- STECF-SGRST notes that the non-regulated (effort in days at sea) otter trawl fleet accounts for about 85% of the effort and contributes significantly to the estimates of landings in weight of cod (87%), plaice (24%) and sole (about 34%). In the case of cod, unregulated otter trawl take about 82% of the total

Review of Celtic Sea effort and catches in the context of proposals to extend the cod recovery zone to include cod stocks in this area

- Data were provided by key players in the fisheries operating in the Celtic Sea region. The coverage was considered adequate to make a good start with the process of describing and detailing activities and catches using the framework of the Annex IIA as applied in other areas.
- STECF SGRST was able to provide summaries for two different spatial descriptions. One for the Celtic Sea as a whole and one for ICES areas VIIfg only.
- Trawl effort predominated in both areas and has declined in both areas recently.
- Results suggested that the VIIfg definition of the Celtic Sea accounted for a large part of the cod landings of the area as a whole and that the CPUE of cod in this area is higher than the area as a whole.
- STECF SGRST discussed whether any future extension of the cod recovery plan to apply to the Celtic Sea cod stock should apply to the whole area or would be effective if restricted to the smaller subset area. It was considered that additional information (such information on spawning area or nursery ground) in areas outside VIIfg would be needed to make such a judgement.

5. INTRODUCTION

The STECF Sub-group on “fishing effort management” held its first annual meeting in ISPRA in Italy, 21-25 May 2007 (SGRST-08-01). As the group was unable to accomplish its tasks due to missing, late and inconsistent data submissions, a follow-up meeting (SGRST 08-03).was called to order in Lysekil, Sweden, 1-5 September 2008. A progress report from the first meeting was presented at the June STECF plenary. This report summarises data presented and the discussions and results of both meetings.

To provide continuing transparency in the scientific advisory process, the meeting was open to observers (sec. 5.2), including stakeholder representatives. One industry representative participated in the first meeting.

5.1. Terms of Reference

By 14 July 2008 the DG Fish of the EU-Commission revised the ToR given to the STECF Subgroup SGRST-08-03. The changes affected the Celtic Sea issues and the revised ToR were disseminated to relevant parties. The overarching request was for: i) an assessment of fishing effort deployed by fisheries and métiers which are currently affected by fishing effort management schemes defined in Annex II to Regulation (EC) No 40/2008; ii)an assessment of fishing effort deployed by fisheries and métiers which will be affected by the extension of the cod recovery plan to the Celtic Sea

1. To provide historical series, as far back in time as possible, according to each of the following fishing areas:

Areas covered by Annex IIA

h. Kattegat (ICES functional unit IIIaS),

i. (i) Skagerrak (ICES functional Unit IIIaN), (ii) North Sea (EC waters of ICES sub-area II and ICES sub-area IV), (iii) Eastern channel (ICES division VIId)

j. West of Scotland (ICES division VIa)

k. Irish Sea (ICES division VIIa)

Areas covered by Annex IIB

l. Atlantic waters of the Iberian Peninsula (ICES divisions VIIIc and IXa, excluding the Gulf of Cadiz)

Areas covered by Annex IIC

m. Western Channel (ICES division VIIe)

New areas related to the assessment request

n. Celtic Sea (total of ICES divisions VIIb, VIIc, VIIe, VIIf, VIIg, VIIh, VIIj and VIIk and total for the subset of ICES divisions VIIf and VIIg)

The data should also be broken down by

- ✓ Member State ;
- ✓ regulated gear type and by associated special conditions defined in Annex II as far as relevant ;
- ✓ unregulated gear types catching
  - o cod in fishing areas a, b(i), b(ii), b(iii), c, d and g;
  - o sole in fishing areas b(i), b(ii), b(iii) and f;
  - o plaice in fishing areas b(i), b(ii) and b(iii),
  - o hake and Norway lobster in fishing area e

for the following parameters:

a. Fishing effort, measured in kW.days and in GT.days and in number of vessels concerned

b. Catches (landings and discards provided separately) of

- ✓ cod, sole and plaice in areas covered by Annex IIA,
- ✓ hake and Norway lobster in areas covered by Annex IIB,
- ✓ sole in areas covered by Annex IIC,
- ✓ cod in the Celtic Sea,

by weight and by numbers at age.

c. Catches (landings and discards provided separately) of

- ✓ non-cod , non-sole and non-plaice in areas covered by Annex IIA,
- ✓ non-hake and non-Norway lobster in areas covered by Annex IIB,
- ✓ non-sole in areas covered by Annex IIC,
- ✓ non-cod in the Celtic sea catches (landings and discards)

by species, by weight and by numbers at age

d. Catch per unit effort (CPUE) of

- ✓ cod, sole and plaice in areas covered by Annex IIA,
- ✓ hake and Norway lobster in areas covered by Annex IIB,
- ✓ sole in areas covered by Annex IIC,
- ✓ cod in the Celtic Sea,

2. Based on the information compiled under point (1) above, to rank gear types, with and without associated special conditions, on the basis of their contribution to catches expressed both in weight and in number of

- ✓ cod, sole and plaice in areas covered by Annex IIA,
- ✓ hake and Norway lobster in areas covered by Annex IIB,
- ✓ sole in areas covered by Annex IIC,
- ✓ cod in the Celtic Sea.

3. If relevant data are available, to comment on the quality of estimations on total catches and discards.

4. To assess the fishing effort and catches (landings and discards) of

- ✓ cod, sole and plaice in areas covered by Annex IIA,
- ✓ hake and Norway lobster in areas covered by Annex IIB,
- ✓ sole in areas covered by Annex IIC,
- ✓ cod in the Celtic sea

and associated species corresponding to vessels of length overall smaller than 10 metres in each fishery, by gear (corresponding to regulated and unregulated gear as defined in Annex II framework) and by Member State according to sampling plans implemented to estimate these parameters.

5. To describe the spatial distribution of the fishing effort deployed both in the Celtic Sea and in the context of Annexes IIA, IIB and IIC to Regulation (EC) No 41/20007, according to data reported in logbooks on the basis of ICES statistical rectangles, with the aim to determine to what extent fishing effort has moved from long distance to coastal areas since the implementation of the days-at-sea regime for the first time in 2003 (Annex XVII to Regulation (EC) No 2341/2002).

6. Based on information compiled under point (1), on assessments done under point (2), (3), (4) and (5) and on the definition of métier adopted on level 6 of the matrix developed by the STECF-SGRN and STECF-SGECA Working Groups, to highlight métiers

- ✓ that are affected by rules defined in fishing effort regimes defined in Annex II for each of the areas a, b(i), b(ii), b(iii), c, d, e and f or
- ✓ that would be affected by a possible extension of the fishing effort (Annexe IIA) related to the cod recovery plan to the Celtic Sea.

In both cases and for each métier which will have been identified, it is requested to specify economic data which are already available or which should be requested to Member States to allow assessment of any change in fishing effort management schemes related to Annex II.

During this process, it is requested that that STECF-SGRST Working Group attempt

- ✓ to classify combinations of grouping of fishing gears and special conditions, as currently define in Annex II, according to the typology suggested by the STECF-SGRN.
- ✓ to notice
  - o when aggregations of combinations may be suggested (e.g. when such combinations cover a similar métier)
  - o when separation of combinations may be suggested (e.g. when such combinations cover two different métiers, or more).

5.2. Participants

In 2007, STECF and its subgroups adopted a new working style with stakeholder involvement as observers to improve transparency in scientific evaluations. Observers were invited to comment on the TORs and related analyses and results. The stakeholder involvement was in accordance with the protocol for STECF meetings observers, Brussels, 20 September 2006.

Experience during the meeting again showed that representatives of stakeholder organisations and interest groups were very interested in the evaluation of the basic information regarding the trends in fleet specific information and specific data deficiencies. Contributions took the form of constructive questions and clarifying comments mainly focussed on recent experience of fishing activity by different fleets.

Participants of the meeting are grouped by STECF members, invited experts, JRC experts, stakeholder, and EU-Commission representatives and are listed in Appendix 4.

5.3. Report notations

To identify the categories assessed for effort and catch this working group adopts terminology that matches as closely as possible that used in the tables outlining days at sea allowances in Annex II of the fishing opportunities regulation, (Council Reg. (EC) No. 40/2008). We illustrate this using Annex IIA as an example.

Annex IIA categorises fleet effort in terms of a “gear group” (specified in point 4 of the annex) and whether the fleet using a given gear group has qualified for any “special condition”, (specified in point 8.3 of the Annex IIA). The days at sea allowances prescribed for these combinations are presented in “Table 1” of the regulation’s annex. The table specifies effort limits for various fishing areas, the areas being defined in point 2 of the annex.

As convenient shorthand this report uses the term ‘derogation’ to refer to any combination of gear group and special condition. So for example, a vessel using a trawl gear of mesh size between 70 and 89mm but which qualifies for no special condition belongs to derogation “4.a.ii none”, (point 4 (a) sub bullet point (ii) of

Annex IIA). A vessel using a trawl gear of the same mesh size but where a vessel has a catch composition with less than 5% cod from 2002 would belong to derogation “4.a.ii IIA8c”, (the ‘IIA’ distinguishes a special condition from Annex IIA as opposed to Annex IIB or Annex IIC). The notation for regulated areas can also be added. If a vessel using the gear “4.a.ii IIA8c” fishes in the Kattegat this can be labelled as effort in the category “4.a.ii IIA8c 2a”, (the 2a refers to the area defined under point 2 (a) of Annex IIA). Table 5.3.1 lists notation for all derogations associated with Annex IIA and links it to descriptions of the fishing gears and special conditions as specified in Annex IIA. Table 5.3.2 lists and describes the fishing area definitions.

Similar notation can be devised for effort categories specified under Annexes IIB and IIC of Regulation (EC) No. 40/2008. Under Annex IIB gear groups are defined under point 3 and special conditions under point 7.2. In 2007 gear group definitions were made for bottom trawls, gill nets and bottom long lines. These groupings were merged in the 2008 legislation. The working group considered maintaining the categories as defined in 2007 was important in terms of maximising the clarity of information from results. Therefore gear groupings have been kept consistent with those from the Annex IIB in 2007 (found in regulation (EC) No. 41/2007). Table 5.3.3 links notation with gear group and special conditions. So, for example, a vessel using a gill net of mesh size ≥ 60mm and conforming to the hake catch composition rules would belong to derogation “3.b.i IIB72a”.

Under Annex IIC gear groups are defined under point 3 and special conditions under point 7. Table 5.3.4 links notation with gear group and special conditions. So, for example, a vessel using a static net of mesh size less than 220mm belongs to derogation “3.b”.

Table. 5.3.1 Gear group and special conditions of Annex IIA, Reg. (EC) No. 40/2008.

Derogation			Mesh size range		Special Condition							
					Catch composition track record			Technical gear or other measure				
Gear group Point 4	Special condition Point 8	Gear	mesh size mm From	mesh size To mm	< 5 % cod	> 60 % plaice	< 5 % of cod & < 5% sole & < 5% plaice	escape window : App 1	escape window : App 2	escape window : App 3	GRID: App 2 to Annex III	other
4.a.i		TD	16	31								
4.a.ii		TD	70	89								
4.a.iii		TD	90	99								
4.a.iv		TD	100	119								
4.a.v		TD	120	inf								
4.a.iii	8.(a)	TD	90	99				120				
4.a.iv	8.(a)	TD	100	119				120				
4.a.v	8.(a)	TD	120	inf				120				
4.a.ii	8.(b)	TD	70	89							X	
4.a.v	8.(j)	TD	120	inf					140			
4.a.v	8.(h)	TD	120	inf								(#) 1
4.a.v	8.(hj)	TD	120	inf					140			(#) 1
4.a.iii	8.(l)	TD	90	99						95		
4.a.ii	8.(c)	TD	70	89	X							
4.a.iv	8.(c)	TD	100	119	X							
4.a.v	8.(c)	TD	120	inf	X							
4.a.iv	8.(k)	TD	100	119	X	X						
4.a.v	8.(k)	TD	120	inf	X	X						
4.a.ii	8.(d)	TD	70	89			X					
4.a.iii	8.(d)	TD	90	99			X					
4.a.iv	8.(d)	TD	100	119			X					
4.a.v	8.(d)	TD	120	inf			X					
4.b.i		BT	80	89								
4.b.ii		BT	90	99								
4.b.iii		BT	100	119								
4.b.iv		BT	120	inf								
4.b.iii	8.(c)	BT	100	119	X							
4.b.iv	8.(c)	BT	120	inf	X							
4.b.iv	8.(e)	BT	120	inf	X	X						
4.b.iii	8.(i)	BT	100	119	X[4]							
4.b.iv	8.(i)	BT	120	inf	X[4]							
4.c.i		GE	0	109								
4.c.ii		GE	110	149								
4.c.iii		GE	150	219								
4.c.iv		GE	220	inf								
4.c.iv[5]	8.(f)	GE	220	inf	X							(#) 2
4.d		TR	0	inf								
4.d	8.(g)	TR	0	109								(#) 3
4.e		LL	-	-								

TD = Trawl or Danish seine or 'similar gears' (dredges are included under similar gears)
BT = Beam Trawl
GE = Gill net or entangling net
TR = Trammel net
LL = Long lines
(#) 1: automatic suspension of licences.
(#) 2: >5% turbot & lumpsucker.
(#) 3 absent from port < 24 h.
4. 2008 logbook.
5. Table 1 of Annex IIA refers to 4.c.iii 8.3(f) but only gear with mesh size ≥ 220 mm is eligible for this derogation.

Table. 5.3.2 Regulated area notation used in this report. For full definitions of these areas refer to Annex IIA, Regulation (EC) No. 40/2008.

Regulated Area	Area name or ICES divisions
2a	Kattegat
2b1	Skaggerak
2b2	ICES sub areas II (EC waters) & IV
2b3	ICES division VIId
2b	Regulated areas 2b1, 2b2 & 2b3 combined
2c	ICES division VIIa
2d	ICES division VIa

Table. 5.3.3 Gear group and special conditions of Annex IIB, Reg. (EC) No. 40/2008

Derogation			Mesh size range		Special Condition	
Gear group Point 3 [1]	Special condition Point 7 [2]	Gear	mesh size mm From	mesh size To mm	Hake landings < 5 tonnes in each of the years 2001, 2002 and 2003	Nephrops landings < 2.5 tonnes in each of the years 2001, 2002 and 2003
3.a		TD	32	inf		
3.b		G	60	inf		
3.c		LL	-	-		
3.a.i	7.2.(a) & 7.2.(b)	TD	32	inf	x	x
3.b.i	7.2.(a) & 7.2.(b)	G	60	inf	x	x
3.c	7.2.(a) & 7.2.(b)	LL	-	-	x	x

TD = Trawl or Danish seine or 'similar gears' (dredges are included under similar gears)
G = Gill net
LL = Long lines
1. Gear groupings correspond to Annex IIB found in Reg (EC) No. 41/2007.
Special conditions 7.2(a) and 7.2(b) can not be complied with independently.

Table. 5.3.4 Gear group and special conditions of Annex IIC, Reg. (EC) No. 40/2008. Note that no special conditions are currently in operation under Annex IIC.

Derogation			Mesh size range		Special Condition
Gear group Point 3	Special condition Point 7	Gear	mesh size mm From	mesh size To mm	
3.a		BT	80	inf	none
3.b		GE & TR	0	219	none

BT = Beam Trawl
GE = Gill net or entangling net
TR = Trammel net

5.4. Data call

On 24 April 2008 the Commission DG Mare invited the relevant institutes to electronically submit fleet specific catch and effort data no later than 26 May 2008.

STECF SGRST notes that in the call, some regulated categories of gill net and trammel net small meshed gear were inadvertently left out of the data call for the 2008 meeting. This omission has been rectified in the database but not in the tables contained here. The problem affects those gears in the Regulated gear sections and the summary of unregulated gear. In each event, the effects are relatively small making only very small percentage differences.

This year, more attention was paid to the detail on unregulated gear categories. For future calls it would be worthwhile ensuring that specific requirements are made more explicit.

The call was based on existing Annexes but discussions in 2008 centre on new aggregations of gear for a new effort regulation going forward. It is likely that this will lead to some querying of the use of the material contained in this report.

Given the repeated experience of late and inconsistent data reports received from Member States, STECF-SGRST reiterates its recommendation that the task of European fleet specific data compilations of nominal effort and catch be better institutionalised and conducted on a routine basis. STECF-SGRST further recommends that it would advantageous to align more closely the categories of the effort regulation with recognised metiers operating in the different areas covered by the Annexes. The metier based approach is central the new DCR and closer alignment of the regulations would ensure relevant biological data could be collected.

5.5. Data policy, formats and availability

Originally, the catch and effort data base structures used by STECF-SGRST were developed by the ICES Study Group on the Development of Fishery-based Forecasts (ICES CM 2004/ACFM:11, 41 pp.) with few amendments required for the review of fishery regulations. The format of the fleet specific data on catches including discards and effort is given in Annex 1 of this report. The format has been almost unchanged compared to the data bases compiled during the STECF subgroup meetings dealing with cod recovery or mixed fisheries reviews over the past 3 years except for one new data field introduced in 2006 specifying the fleets' aggregations regarding the special conditions defined in Annexes IIA-C of Council Reg. 41/2007.

5.5.1. Data policy

Experts reported about national data policies of the national fleet specific landings, discards and effort data in support of a continued use of the data by STECF-SGRST but with the required permission for any use by other scientific or non-scientific groups. This implies that national experts need to be contacted for their consent before granting access to the data. However, Denmark and Portugal reserves the right of the deletion of the national data on request.

JRC requests to be informed about applications of data access and their notifications.

5.5.2. Nominal fleet specific effort data 2000-2007

The fleet aggregation according to the derogations (gear group, mesh size and management area) defined in Annexes IIA-C is within the competence of the Member States' institutes and differ between countries due to availability of essential information, different interpretations and/or different expertise to manage the extensive databases. Inconsistencies in interpretation and fleet aggregations and changes to the basis of deriving effort data (eg VMS compared with logbooks) caused a few data re-submissions following the first meeting of STECF –SGRST. Final analysis was deferred to the second meeting 1-5 September 2008 and finally presented here.

STECF-SGRST notes that assignment of derogations is based on best expert knowledge and data availability, which also reflects cooperation with the national control and enforcement institutions. Specific data errors may exist regarding the huge data bases and the special knowledge required when dealing with them.

STECF-SGRST notes that there have been no requests to evaluate national proposals for fleet aggregations. Thus, the data bases and their evaluations do not include any additional fleet aggregations to those given in the Annexes IIA-C of Council Reg. 40/2008.

The availability of the fleet specific effort data requested by Member State is summarised in the following paragraphs and Table 5.5.2.1. The additional fleet aggregation according to the derogations laid down in the Council Reg. 40/2008

Annexes A-C resulted in quite consistent effort trends compared with last year's STECF-SGRST data evaluations. The overall differences of the summed nominal effort by nation, area and year range generally below 10%.

Belgium: Belgium provided effort data for 2000-2007 by quarter, for all relevant areas where the Belgian fleets are operational. For the period 2000-2002 the effort (and landings) is allocated to the rectangle where the most effort occurred. Since 2003 effort (and landings) is split proportionally over the rectangles as effort became available by rectangle from logbook data. As Belgium does not have trip-by-trip information on the true mesh size for its fleets, Belgium (as well as other countries) agreed to assume certain mesh sizes for its beam trawler fleets. Beamers operating in area VIIIa,b were assumed to use a 70-79 mm mesh size as this is the minimum legal mesh size in that area for beamers. For the North Sea, the trips were split according to the rectangles reported in the logbooks, and mesh sizes were allocated in line with Council Regulation (EC) N° 2056/2001. This regulation stipulates that beam trawlers are prohibited to use less than 120 mm in ICES Division IV to the north of 56° 00' N. Therefore all beam trawl information from this part of ICES Division IV was accounted against an assumed >120mm mesh size. The same regulation also stipulates that within the rectangle with coordinates east coast of the UK between 55° 00' and 56° 00' and the points 55° 00' N – 05° 00' E and 56° 00' N – 05° 00' E, beam trawlers can use 100 to 119 mm mesh size. Here also it was assumed that the mesh size used by the Belgian Beam trawl fleet was 100-119 mm. For the rest of ICES Division IV (the southern part) a mesh size of 80-89 mm was assumed for the beam trawlers. Apart from these assumed mesh size which are based on rectangle information from logbooks, it was also assumed that the shrimp fishery used a mesh size of 16-31 mm. The mesh size of the beam trawl fleets in the other area's was assumed to be 80-89 mm. The three Belgian gear categories are: beam, otter, and other. For otter and other gear, no assumptions of mesh sizes were made. The effort in kW*days is calculated as engine power times days at sea as requested, where days at sea are calculated as fishing hours divided by 24. The requested GT_DAYS_AT_SEA is not a straight forward extraction from the Belgian database. The procedure used is as follows: Extracting the gross tonnage per trip and area, as well as the fishing hours spent by area. To become the fishing days the following formula was used: Fishing days = (Fishing hours + 9.5)/21.0, which is based on an analytical evaluation of the relationship between fishing days and fishing hours for all vessels trips from the Belgian fleet over one year. Note that this is still a proxy for "Days at Sea" as it is "Fishing days". The multiplication of the gross tonnage with the fishing days is the best estimate to calculate the requested GT_DAYS_AT_SEA. For the extraction of the number of vessels, the following procedure was used: After allocating each trip to the rectangles where fishing occurred (see above North Sea procedure), the same assumptions were made to allocate the different mesh sizes to the beam trawl fleets in the different quarters. By doing this some vessels occurred several times in the same quarter in the same area. By replacing the values to 1 and hereby counting several appearances of the same vessel in an area and quarter, we derived a sole entry from that vessel by year, quarter, gear type and mesh size and could therefore count the number of vessels.

No special conditions were allocated to any Belgian fleet category until now as no Belgian vessel applied for any special condition in any year since the special conditions have been introduced.

Table 5.5.2.1 Overview on 2000-2007 effort data reports provided by EU member states with and without special conditions laid down in Annexes IIA-C of Council Regulation 40/2008.

According to 40/2008 Annexes IIA-C

Country	effort data 2000-2006 update
Belgium	kW*days and GT*days and number of vessels, no update
Denmark	kW*days and GT*days and number of vessels
France	kW*days and GT*days and number of vessels
Germany	kW*days and GT*days and number of vessels, no update
Ireland	kW*days and GT*days and number of vessels (no special cond., no mesh size prior to 2003)
Netherlands	kW*days and GT*days and number of vessels
Portugal	kW*days and GT days and number of vessels, mesh size inconsistencies
Spain	kW*days and GT days and number of vessels, mesh size and area inconsistencies
UK England incl. Northern Ireland	kW*days and GT*days and number of vessels
UK Scotland	kW*days and GT*days and number of vessels
Sweden	kW*days and GT*days and number of vessels

Country	effort data 2007
Belgium	kW*days and GT*days and number of vessels
Denmark	kW*days and GT*days and number of vessels
France	kW*days and GT*days and number of vessels
Germany	kW*days and GT*days and number of vessels
Ireland	kW*days and GT*days and number of vessels (no special cond.)
Netherlands	kW*days and GT*days and number of vessels
Portugal	kW*days and GT days and number of vessels, mesh size inconsistencies
Spain	kW*days and GT*days (only trips with hake, no number of vessels, no special condition)
UK England incl. Northern Ireland	kW*days and GT*days no number of vessels
UK Scotland	kW*days and GT*days and number of vessels
Sweden	kW*days and GT*days and number of vessels

Denmark: Denmark has provided effort data for 2000-2007 by quarter, for the areas: North Sea, Skagerrak and Kattegat in the required data format, including kW*days, GT*days and number of vessels. The gear categories are: Beam trawl, Danish seine, dredge, pelagic seine, gill nets, trammel nets, long lines, otter board trawlers and other gears. Mesh sizes were stratified according to requirements. The Danish data include:

- all trip information for vessels above 10 m (with mandatory logbook completing)
- less complete information on trips by vessels below 10 m. These vessels must submit "declarations" of fishing area only. Each trip has been allocated an effort of 1 (one) fishing day.

Notice, that a new database format has been in use in Denmark since 1st January 2007, which has had some consequences on the calculation of kW. Data provided in the previous years included HP information as categories (<100, 200, 300, 400, 500, 600, 700, 800, 900, 1000, 1250, 1500, >1500 and NA), and kW were estimated as 0.7355*average HP in the category. Data provided to the group this year included the actual HP value of the vessel. This year's nominal effort figures may therefore differ from the previous year's figures.

Since the 2007 meeting significant progress has been achieved regarding integration of special conditions in the Danish effort data. In particular, the database maintained by the Danish Directorate for Fisheries DDF (Ministry of Food, Agriculture and Fisheries) for registration and control of the days-at-sea regulation has now been made directly accessible to the Danish Institute of Fisheries Research (now: DTU-Aqua).

This database contains information on a trip-by-trip basis on gear category and possible derogations (if any) for all fishing trips since 2006, thus reflecting the actual use of derogations by Danish fishermen. The database covers the derogations IIA81a, IIA81c, IIA81e, IIA81h, IIA81j and IIA81l. and was merged with the DIFRES DFAD catch and effort database for 2006. In addition, further potential (or eligible) derogations were calculated for the period 2002-2005, based on post-stratification of 2002 catch records according to annex IIA specifications. These include the derogations IIA81c, IIA81d and IIA81f. These derogations are referred to as "eligible" in the sense that they could potentially be requested by Danish fishermen based on their 2002 catch record. The limited number of overlap between both sources of information indicates that Danish fishermen have in reality made little use of 2002 records-based derogations they were eligible to, but have on the contrary requested gear-based derogations (e.g. by using escape windows). The only overlap between both types of derogations is the derogation IIA81c, which for 2006 could be calculated either as based on 2002 catch record or as coming from the database of the Danish Directorate for Fisheries. The latter option was chosen, and differences in the amount of Danish effort within that derogation between 2002-2005 and 2006 should be interpreted as the difference between "eligible" use of this derogation based on post-stratification of logbooks data and its "true" use by Danish fishermen in 2006.

France: For France effort data from 2000 to 2007 in kW and gross tonnage days at sea were updated in the mixed fishery database after the meeting of June and the data for the area VIII were added. These data give the number of vessels concerned in a defined area for each fishery for all gears with all mesh size ranges. The calculation of days number results from the division of fishing time (as recorded in the log-books) by 24, rounded to the upper number of days by quarter.

Concerning data quality, data have been compiled from logbook recorded in the French national database. Data used are not completely exhaustive but the data quality has been improved since 2000. All data were provided for all area concerned by the cod recovery plan but they did not take into account limits defining waters under the sovereignty or jurisdiction of Member States as laid down in article 2a of the Amendments to Regulation (EC) No 423/2004 about geographical definition.

The special conditions have been calculated thanks to an algorithm taking into account the specific composition for each trip.

A reference table have been used to create the relationship between the mesh size recorded into the logbook and the mesh size range defined into the mixed fisheries database. When this information is missing, the missing value '-1' has been used.

Germany: Germany provided fleet specific effort data for 2000-2007 in the requested formats derived from official logbook data bases covering all vessels ≥10m. In addition to the usual nominal effort data in kW*days at sea, the requested effort data are also presented in the units of GT*days at sea and maximum number of vessels observed active in the defined derogations. The latest data submission covers the areas defined in Annex IIA, i.e. Skagerrak, Kattegat, North Sea including the southern part of Division II in the EU-Zone and ICES Divisions VI and Va and Vb. There were no demersal fisheries (mesh sizes ≥70mm) conducted in the Eastern Channel, the Irish Sea or the southern Divisions. The data consider the aggregation by quarter, area, gear, mesh size, and existing derogations including special conditions of 8.1.a, 8.1.c, 8.1.d, 8.1.e and 8.1.f. During 2000-2007, the fleets did not apply or have been eligible for other special conditions as confirmed by personal communication with the control and enforcement institute (BLE).

Ireland: Ireland provided fleet specific effort data for 2000-2007 in the requested formats, derived from official logbook databases for vessels ≥10 meters. Data has been provided in nominal effort as kW*days-at-sea, effective effort in kW*hours fishing, GT*days at sea and vessel numbers within each category. Submitted data has been aggregated by year, quarter and gear for all areas detailed in Annex IIA in which the Irish fleet is active. This data is not divided into special conditions, as Irish vessels have not applied for special conditions relating to this data call. Those special conditions applied for by Irish vessels relate to the allocation of additional days at sea for enhanced observer coverage. In the majority of cases, days at sea allocations are not considered limiting within the Irish fleet. Limitations affecting fishers primarily result from restricted quota availability, in which cases additional days at sea are of no advantage. Mesh size information was only available from 2003 onwards. Days-at-sea effort for 2000-2002 is presented as a calculated proxy, obtained from the average ratio of operational fishing days to days at sea by gear. Revisions have been made to the 2003-2006 data provided to STECF-SGRST in 2008. These revisions result from a combination of data availability updates and database improvements carried out in the later part of 2007.

Netherlands: The Netherlands attended the first of the meetings of STECF-SGRST on the assessment of fishing effort regime. The Netherlands initially provided reworked effort data based on VMS information for the years 2000-2007, as requested in Annex 1 part B of the official data call. Following screening it was established that data for 2000 and 2001 were derived from a rather sparse coverage of VMS information and were therefore not representative. It was agreed that these years should be omitted from the database and for the Netherlands, only material from 2002 onwards was included. For the years included in the database, there was good correspondence between the new VMS based material and that provided in previous years. The data did not distinguish between subareas but effort was aggregated over the whole area 2 (2B123) (i.e. Skagerrak, North Sea zone IV, and Eastern English Channel). Hence, it cannot be distinguished whether vessels had fished in the Skagerrak, the North Sea zone IV, or in the Eastern English Channel. No special conditions were indicated.

Portugal: No experts from Portugal attended the meetings but the colleagues provided effort data for 2004-2007 (Kw*days and GT*days) by quarter and year in the required data format for the areas 8c and 9a where the Portuguese fleet operates. Numbers of vessels were not provided. The information refers to all fishing vessels with overall length ≥10 m, licensed for the period 2004-2007. The gear categories and mesh size provided were in agreement with the data call and Annex IIB, gillnet with mesh size >60mm, otter trawl with mesh size >32mm and bottom longlines. However, no mesh size information could be provided for significant parts of the fleets deploying the gears defined. In the case of trawl, the unknown mesh size means that although the mesh size is greater than 32 mm, it is not possible to specify according to the categories defined by this working group, but their effort can be taken into account. The same is not applicable to the gillnets with unknown mesh size. This resulted in a high proportion of gillnet effort which could not be assigned to the defined derogations and therefore were grouped as unknown (none). Special conditions have been provided for a mixed passive gear category ("PGP"), which includes vessels operating with more than one gear. Although this group includes unregulated gears (trammel nets, traps, dredges, etc.) and regulated gears (longlines and gillnets) affected by the special conditions, it was not possible to consider the gear specific effort in the evaluation and they were added to "none". The trawl fleet was further allocated to two fisheries, targeting crustaceans operating in area 9a or targeting demersal fish operating in areas 8c and 9a. Effort was computed differently for those vessels covered by the Southern Hake and *Nephrops* recovery plan which have effort limitations and other vessels. The former were computed based on logbooks information and the last based on sales notes, assuming each sale represents one fishing day.

Spain: Spain provided nominal effort (kW*days) and GT*days at sea data for 2000-2007 by quarter, ICES divisions and mesh size range for ICES divisions VII e-k, VIIIc and IXa (without Gulf of Cádiz). Data contain only information of the trips that landed hake.The eleven Spanish gear categories are: BEAM (Beam trawl), DEM_SEINE (Danish and Scottish seiners), DREDGE (Dredges), GILL (Drift and fixed Nets except Trammel Nets), LONGLINE (Longlines), OTTER (Bottom trawl), PEL_SEINE (Pelagic seine and purse seine), PEL_TRAWL (Pelagic Trawl), POTS (Pots and traps), TRAMMEL (Trammel Nets) and NONE-N/A (unidentified gears). Effort by rectangle and by special conditions were not available. Allocating the trips to the strata some vessels occurred several times in the same year, quarter, gear type and mesh size in the same area, providing incorrect numbers, therefore number of vessel was not available.

Following the meeting, Spain also provided effort information for ICES VIa. This material arrived some time after the effort data compilations had been completed and after STECF had completed its review of available effort data from Member states. For these reasons, the data are included as a small summary table in Appendix III.

Sweden: Sweden provided fleet specific effort data for 2000-2007 in the requested formats derived from official logbook data bases covering all vessel ≥10m. In addition to the usual nominal effort data in kW*days at sea, the requested effort data are also presented in the units of GT*days at sea and number of vessels. The latest data submission covers the areas defined in Annex IIA, i.e. Skagerrak, Kattegat, North Sea. The data consider the aggregation by quarter, area, gear, mesh size, and existing derogations including special conditions of 8.3.a, 8.3.b.

For vessels <10m Sweden provided total nominal effort usual nominal effort data in kW*days at sea, the requested effort data are also presented in the units of GT*days at sea in areas defined in Annex IIA, i.e. Skagerrak, Kattegat, North Sea. The data consider the aggregation by quarter, area, gear, mesh size, and existing derogations including special conditions of 8.3.a, 8.3.b.

The main problem in using Swedish data analysing the use of technical regulations according to Annex 11a has been the mismatch in the introduction of a new technical measure in annex IIA and the national coding of the gear in the logbook. This has meant that the use of the special condition IIa8.3a has been assessed by other data sources than the logbook. During 2007, gear code for the 8.3 a was introduced which allowed a comparence of the data sources for 2005, and 2006.the result from this comparison showed that the other data source and the loggbok matched satisfactory.

For special condition IIa8.3b there has been no such mismatch the introduction of the gear and the gear cod was introduced simultaneously.

UK England (England, Wales & Northern Ireland): UK England Wales NI provided effort data for 2000-2007. These data were provided as kW+days, GT+days and number of vessels. The special conditions were allocated according to eligibility of vessels during the relefvant reference periods based on the appropriate use of gear/mech combinations, catch compositions by activity. However, it needs to be borne in mind that experience of running the systems has been that the fishermen do not always take up the options. The derogations bring with them obligations to carry forward a restriction to their activity - e.g. to maintain the low level of cod etc by-catch rates. In many cases fishermen choose not to take up the derogations and fished to the smaller amounts of days at sea so they could be less restricted in their catch patterns. There are also instances when observations of their activity lead to the derogations being repealed - e.g. some vessels ended up losing a derogation because they could not maintain the low level of cod catches required by the derogation. As such, there is a clear difference between what these vessels might have historically done in terms of fishing effort and future patterns of activity - it cannot be simply assumed that if a lot of fishing effort was seen by vessels eligible for a derogation in past years, that this will be seen in the current or future years. There are also many vessels that are eligible for more than one of the possible derogations - e.g. every vessel eligible for 8.1.(d) must defacto be eligible for 8.1.(c). These reasons make the coding of effort against the various derogations not a clear cut exercise – but in order to produce the data for the analysis a decision was made when compiling the data to allocate fishing effort for individual fishing vessels to the different special conditions according the condition that would give them the most days at sea. When looking at the analysis of effort for any one special condition, it thus needs to be borne in mind that the condition itself (and thus its associated effort) could cut across other conditions as well. For new vessels coming into the fishery, a link is made back to the track record of the vessels associated with the licence used to allow entry. Any new boat that wants to enter and start fishing in the recovery zones with regulated gear goes through several checks. These include a review of where its licence cover has come from, in terms of the historic activity of the vessels holding the licences during the reference period. These track records must allow the current new vessel to meet the track record criteria in full or they would not be allowed to fish. For example, a new demersal trawler coming into the North Sea has to buy licences which were on vessels active in the North Sea with the particular type of regulated gear during the reference period for fishing to be permitted. In cases where the new vessel is coming in after aggregating several licences from smaller vessels, all of the donor licences have to meet the track record criteria as well.

UK (Scotland): Scotland provided effort data for the years 2000-2007. Effort is provided in terms of kW*days at sea (kWdays), gross tonnage*days at sea (GTdays) and number of vessels per category. Number of vessels and kWdays data are provided for all years. Effort in terms of Gross Tonnage*days at sea is provided for the years 2003-2007 consistent with the completion of EU wide vessel gross tonnage recalibration. As for catch data, effort data conforms to the aggregation by quarter, area, gear and mesh size as set out in the data request. Fisheries are defined using the combination of gear, mesh size and fishing area as specified in the STECF data requirement. Fisheries were further split according to SGDFF format area definitions

(4, 7d etc). Special conditions (as per Appendix 5 of the data requirements document) were applied where possible. The databases available to UK (Scotland) do not provide information on whether a vessel has adopted one of the technical measures relevant to some special conditions or on special conditions requiring in-season management. Therefore, special condition designations have only been entered for certain fisheries. These include fisheries that can be built up from vessels active in 2002 and whose track record complied with one of the species composition rules set out in Annex IIA of regulation 40/2008. That is, all records of vessels fishing within waters subject to the effort rules of Annex IIA were grouped according to unique combination of vessel, gear type and mesh size range as used by Scottish government marine directorate (this combines gear groups 4.a.ii and 4.a.iii; also 4.a.iv and 4.a.v). For data for 2002 the annual catch composition of these grouped records were tested for compliance with the special condition requirements and special condition codes assigned to vessels if appropriate. In terms of area, all activity of a given vessel in 2002 was aggregated. For other years vessel, gear and mesh size combinations received the same special condition status as applied in 2002 (assuming the same combination existed in 2002). Also special condition 8.1(i) was applied to vessels using beam trawls with mesh size >= 100mm if they had used beam trawls with mesh < 100mm in 2003, 2004, 2005 or 2006 and special condition 8.1(g) for vessels using trammel nets with mesh size < 110mm and absent from port no more than 24 hours. After assignment of special condition status vessels were grouped into fisheries. If a vessel fished in more than one area or used more than one type of gear or mesh size it is possible for it to contribute to more than one fishery grouping and to have qualified for special condition status in one or more fisheries but not in others. The number of vessels associated with each gear, mesh size, SGDFF area and special condition status has also been provided. Any vessel assigned to more than one fishery grouping will be counted in the number of vessels contributing to each grouping, i.e. there is the possibility of multiple counting of vessels. Existing special conditions were assigned exclusively i.e. there is no repetition of records to accommodate assigning more than one special condition code. So for example if a fishery qualified for both special condition code IIA81c and IIA81d it would be assigned IIA81d on the grounds the latter allows a greater number of days at sea. Catch assigned to statistical squares west of the line defined in section 2.2 of Annex IIA have not been excluded from calculations determining 2002 track record. The special condition defined under Annex IIB was found not to be relevant to Scottish vessels. No recorded landings from the divisions regulated under Annex IIB are present in any of the years 2000-2007. Data is compiled on a basis comparable with the information from the rest of the UK. Effort on voyages using more than one mesh size is allocated according to log book data. This affects the information for effort in the years prior to 2003, when vessels were allowed to use different mesh sizes within the same voyage. Similarly, effort on voyages fishing in more than one rectangle is allocated according to logbook data. Starting with the 2007 STECF meetings Scottish fleet effort for the other gears (dredges, pelagic seines, pots) is provided directly by UK (Scotland) on a comparable basis with that provided previously by UK (England).

5.5.3. Effective fleet specific effort data by rectangle 2003-2007

In order to accomplish the ToR item 5 dealing with spatial distributions patterns of fishing effort, SGRST continued to use the data base structure agreed last year and as defined under item C of Annex 1 to this report (data formats). As the nominal effort in kW*days or GT*days can not be precisely divided into the requested geographical resolution of ICES statistical rectangles, the group decided to invite data on effective effort in units of trawled hours by statistical rectangle for trawled gears only (BEAM, OTTER and DEM_SEINE). The data have been made available from the national logbooks and aggregated to the regulated gear groups (derogations) defined in Annexes IIA, IIB and IIC of Council Reg. 40/2008.

Belgium: Belgium provided effort data (hours fished) for 2003-2007 by rectangle and by quarter, for all relevant areas where the Belgian fleets are operational. Since 2003 effort (and landings) are split proportionally over the rectangles as effort became available by rectangle from logbook data. As Belgium does not have trip-by-trip information on the true mesh size for its fleets, Belgium (as well as other countries) agreed to assume certain mesh sizes for its beam trawler fleets. Beamers operating in area VIIIa,b were assumed to use a 70-79 mm mesh size as this is the minimum legal mesh size in that area for beamers. For the North Sea, the trips were split according to the rectangles reported in the logbooks, and mesh sizes were allocated in line with Council Regulation (EC) N° 2056/2001. This regulation stipulates that beam trawlers are prohibited to use less than 120 mm in ICES Division IV to the north of 56° 00’ N. Therefore all beam trawl information from this part of ICES Division IV was accounted against an assumed >120mm mesh size. The same regulation also stipulates that within the rectangle with coordinates along the east coast of the UK between 55° 00’ N and 56° 00’ N and the points 55° 00’ N – 05° 00’ E and 56° 00’ N – 05° 00’ E, beam trawlers can use 100 to 119 mm mesh size. Here also it was assumed that the mesh size used by the Belgian Beam trawl fleet was 100-119 mm. For the rest of ICES Division IV (the southern part) a mesh size of 80-89 mm was assumed for the beam trawlers. Apart from these assumed mesh size which are based on rectangle information from logbooks, it was also assumed that the shrimp fishery used a mesh size of 16-31 mm. The mesh size of the beam trawl fleets in the other area’s was assumed to be 80-89 mm. The three Belgian gear categories are: beam, otter, and other. For otter and other gear, no assumptions of mesh sizes were made. No special conditions were allocated to any Belgian fleet category until now as no Belgian vessel applied for any special condition in any year since the special conditions have been introduced.

Denmark: Denmark provided effort data by rectangle for 2003-2007, with the same gear and mesh sizes categories and including the same derogations as for nominal effort data (kW*days, see Sec. 5.5.2). Fishing hours are not registered in Danish logbooks, and could not be provided. Notice, that the unit of effort by rectangle is the number of fishing days. This figure is obtained as the sum (by rectangle) of each registered fishing day divided by the number of ICES rectangles visited during that fishing day.

France: France updated effective effort data in kW*days GT*days and numbers of boats for the period 2000-2007. These data were provided by rectangle and by quarter, for all areas in the request format taking into account derogations defined in Annex 2a of the Council Reg. 40/2008. These data are available from logbooks and give the number of hours trawled for each fleet.

Germany: Germany aggregated the effective effort in units of trawled hours deployed by vessels using demersal towed gears, i.e. beam, otter trawls and seines. As requested, this data submission utilised ICES statistical rectangles.

Ireland: Ireland provided effective effort by ICES statistical rectangle in units of hours trawled for the period 2003-2007, derived from the national logbook database for vessels greater than or equal to 10 meters in length. This has been provided in the requested formats for demersal trawled gears, i.e. beam trawls, otter trawls, and demersal seines. Data has been aggregated by year, quarter and gear for all areas detailed in Annex IIA in which the Irish fleet is active.

Netherlands: The Netherlands provided effective effort (in units of fishing hours) by rectangle for the years 2003-2007, as requested in Annex 1 C of the official data call.

Portugal: Portugal provided effective effort data by statistical rectangle in hours fished.

Spain: Spain did not provide effective effort data by statistical rectangle.

Sweden: Sweden provided effort data by rectangle for 2003-2007, with the same gear and mesh sizes categories and including the same derogations as for nominal effort data (see sec. 5.5.2). The effort data are expressed as hours fishing per trip and vessel /Ices square, based on the set position of the gear. The data could overestimate the hours spent /Ices square since the fishing operation to a large extent could have been performed in neighbouring Ices rectangles.

UK England: England provided effort by ICES statistical rectangle data for the years 2003-2007. It was not possible to provide trawled hours data however. This is because hours trawled is not a mandatory field in the fishers' logbooks and is therefore not necessarily completed. Instead, the data used to provide nominal effort (see section 5.5.2) is held on a statistical rectangle basis by UK (England). This data was simply multiplied by 24 to get a measure of fishing effort expressed in hours.

UK (Scotland): Scotland provided effort by ICES statistical rectangle data for the years 2003-2007. It was not possible to provide trawled hours data however. This is because hours trawled is not a mandatory field in the fishers' logbooks and is therefore not necessarily completed. Instead, the data used to provide nominal effort (see section 5.5.2) is held on a statistical rectangle basis by UK (Scotland). This data was simply multiplied by 24 to get a measure of fishing effort expressed in hours.

Table 5.5.3.1 Overview on 2003-2007 effective effort data reports (trawled hours by derogation and rectangle) provided by EU member states with and without special conditions laid down in Annexes IIA-C of Council Regulation 40/2008.

According to 40/2008 Annexes IIA-C

Country	effort data 2003-2006 update
Belgium	hours trawled by derogation and rectangle, no update
Denmark	fished days by derogation and rectangle, no update
France	hours trawled by derogation and rectangle
Germany	hours trawled by derogation and rectangle, no update
Ireland	hours trawled by derogation and rectangle, no special condition
Netherlands	hours trawled by derogation and rectangle, no special condition
Portugal	hours trawled by derogation and rectangle
Spain	none
UK England incl. Northern Ireland	hours trawled by derogation and rectangle
UK Scotland	hours trawled by derogation and rectangle
Sweden	hours trawled by derogation and rectangle

Country	effort data 2007
Belgium	hours trawled by derogation and rectangle
Denmark	fished days by derogation and rectangle
France	hours trawled by derogation and rectangle
Germany	hours trawled by derogation and rectangle
Ireland	hours trawled by derogation and rectangle, no special condition
Netherlands	hours trawled by derogation and rectangle, no special condition
Portugal	hours trawled by derogation and rectangle
Spain	none
UK England incl. Northern Ireland	hours trawled by derogation and rectangle
UK Scotland	hours trawled by derogation and rectangle
Sweden	hours trawled by derogation and rectangle

5.5.4. Fleet specific landing and discard data 2003-2007

The availability of the fleet specific catch and discard data requested by Member State is summarised in the following paragraphs and Table 5.5.4.1. According to the experts, none of the national data bases includes unallocated landings. Overall, the historic data provided for the period 2000-2006 in 2008 agreed with those provided to STECF-SGRST in 2007. Assignment of derogations and special conditions is based on best expert knowledge and data availability. Specific data errors may exist regarding the extensive data bases and the special knowledge required when dealing with them.

Not all Member States provided landings, discards and biological data from all species requested, so only anglerfish, cod, haddock, whiting, saithe, hake, plaice, sole, mackerel, horse mackerel, blue Whiting, rays, peneus shrimps and *Nephrops* are considered in the analyses conducted. Overall, the landings figures compiled in the data base are consistent with the officially reported landings of the stocks considered in the analyses. Catch data evaluations are given in specific sections dealing with the reviews of Annexes IIA, IIB and IIC.

Some Member States again did not provide essential quality parameters of the data. Consequently, STECF-SGRST remains in a poor situation regarding the description of the quality of the fleet specific estimates of discards and age disaggregated catches, mainly due to lack of requested information (no. of discard samples, fish measured and aged). Consequently, TOR 3 was not addressed.

Belgium: Belgium provided fleet specific landings data for 2003-2007 derived from official logbook databases for all vessels ≥10 meters. The data covers all areas defined in Annex IIA in which the Belgian fleets are active and conforms to the requested aggregation, by quarter, area, gear and mesh sizes.

The species provided are: anglerfish, brill, cod, dab, haddock, hake, lemon sole, *Nephrops*, plaice, saithe, pollack, sole, skates and rays, turbot and whiting. The age composition on landings for sole and plaice in ICES subdivisions IVb, IVc, VIId, VIIa, VIIfg and sole in subdivision VIIIab have been provided by quarter for the Belgian beam trawlers. The total number of samples, as well as numbers aged and length measurements by quarter have been apportioned in the same ratio as total quarterly beam trawl fleet landings to annual landings.

Discard data for 2004-2007 were provided from the Belgian Beam trawl fleet for the following species: anglerfish, brill, cod, dab, haddock, hake, lemon sole, plaice, saithe, sole, skates and rays, turbot and whiting. The areas covered are 4, 7a, 7d, 7e, 7f and 7g. Belgian discard data represent all ages without disaggregation by age. Information by area for all observer-trips during the year have been merged together, giving an annual percentage of discards estimate per species. The annual estimates of discard rate have been assumed to apply in each of the 4 quarters.

There is no information on misreporting. The landings in the database are based on combined information of logbook data and sale slips. The actual landed weight is split according the logbook information on hours fished in the respective rectangles. As Belgium does not have trip-by-trip information on the true mesh size for its fleets, Belgium (as well as other countries) agreed to assume certain mesh sizes for its beam trawler fleets. Beamers operating in area VIIIa,b were assumed to use a 70-79 mm mesh size as this is the minimum legal mesh size in that area for beamers. For the North Sea, the trips were split according to the rectangles reported in the logbooks, and mesh sizes were allocated in line with Council Regulation (EC) N° 2056/2001. This regulation stipulates that beam trawlers are prohibited to use less than 120 mm in ICES Division IV to the north of 56° 00' N. Therefore all beam trawl information from this part of ICES Division IV was accounted against an assumed >120mm mesh size. The same regulation also stipulates that within the rectangle with coordinates east coast of the UK between 55° 00' and 56° 00' and the points 55° 00' N – 05° 00' E and 56° 00' N – 05° 00' E, beam trawlers can use 100 to 119 mm mesh size. Here also we assumed that the mesh size used by the Belgian Beam trawl fleet was 100-119 mm. For the rest of ICES Division IV (the southern part) a mesh size of 80-89 mm was assumed for the beam trawlers. Apart from these assumed mesh size which are based on rectangle information from logbooks, it was also assumed that the shrimp fishery used a mesh size of 16-31 mm. The mesh size of the beam trawl fleets in the other area's was assumed to be 80-89 mm. The three Belgian gear categories are: beam, otter, and other. For otter and other gear, no assumptions of mesh sizes were made.

No special conditions were allocated to any Belgian fleet category until now as no Belgian vessel applied for any special condition in any year since the special conditions have been introduced.

Denmark: Denmark provided quarterly landings data for 2002-2007 for the areas North Sea, Skagerrak and Kattegat in the required data format, and covering 39 species. The Danish data include all trip information from vessels both above 10 m (with mandatory logbook submision) and below 10 m (with declarations of fishing area ("farvandseklæring") and being allocated an effort of 1 (one) fishing day. Landings information comes from the sale slips register. Significant progress has been achieved between both meetings in order to integrate special conditions in the Danish effort data, leading to the inclusion of 6 "true" derogations actually used by Danish fishermen in 2006 and 2007 and 3 "eligible" derogations based on post-stratification of 2002 catch records (see Sect. 5.5.2). Age distribution data were provided for cod, haddock, plaice, sole and saithe 2003-2007. Numbers of samples for landings by species/fishery were provided according to the requirement. Discards data were provided for Kattegat, Skagerrak and North Sea. However, the Danish discards sampling program is structured according to national fisheries definitions, which do not cover the same level of precision as landings data with regards to mesh size (categories available are Danish Seine, *Nephrops* trawl and Demersal trawl). The number of samples within each stratum is considered too low to be further broken down to the requested mesh sizes categories. Therefore the Danish discards data were not included in the database. There is no quantitative information on misreporting, but there are some indications on potentially significant mis- and underreporting of cod in Kattegat (ICES WGBFAS 2007).

France: Landings data by derogation to the mixed fishery database from 2000 to 2007 were updated for all areas, species and gears. Data by age has been provided for whiting and saithe for the same period.

Discards samples have not been raised to the total French fishery. The level of sampling being rather weak for most of the fishery and the variability high from one trip to another, it has not been possible so far to raise the samples to the total fishery.

Raw data from observed trips (under the DCR program) are provided in Table 1; Appendix 1. Those data are provided by area and main gear. For each of them, Table 1 contains hauls numbers or 'pieces of net' number, mean cod landings and discards calculated from sampled trips. Graphs in Appendix 1 show the discards rate relating to the landings.

These results are to be treated with caution at the present time considering the high degree of uncertainty arising from the low sampling level. Furthermore, these results do not take into account the possible differences between metiers. A fuller description of French metiers can be found in Appendix 2.

Some metiers or years show somewhat high discard ratio for cod, but most of them are based on a very small amount of cod.

Table 5.5.4.1 Overview on 2003-2007 catch data reports (landings and discards) provided by EU member states with and without special conditions laid down in Annexes IIA-C of Council Reg. 40/2008.

According to 40/2008 Annexes IIA-C

Country	landings data 2003-2006 update
Belgium	landings, age composition
Denmark	landings, age composition, no update (no special condition)
France	landings, age composition
Germany	landings, age composition, no update
Ireland	landings, age composition, no special condition
Netherlands	landings, age composition, no mesh size for beam, no special condition, only plaice, sole and cod
Portugal	landings, age composition
Spain	landings (no mesh size, no special condition), age compositions (5 species data; no division, quarter, metier, mesh size and special conditions)
UK England incl. Northern Ireland	landings, age composition update
UK Scotland	landings, age composition
Sweden	landings, age composition, not by quarter, no update

Country	discards data 2003-2006 update
Belgium	discards
Denmark	data not in the requested format
France	none
Germany	discards, age composition, no update
Ireland	none
Netherlands	discards, age composition (no mesh size for beam, no special condition), only plaice, sole and cod
Portugal	none
Spain	discards (only from otter; only divisions in VIIIc-IXa in 03-05, no quarter and special conditions), age composition (otter 11 species , only divisions in VIIIc-IXa in 03-05, no quarter and special
UK England incl. Northern Ireland	discards, age composition
UK Scotland	discards, age composition
Sweden	discards, age composition

Country	landings data 2007
Belgium	landings, age composition
Denmark	landings, age composition (no special condition)
France	landings, age composition
Germany	landings, age composition
Ireland	landings, age composition (no special condition)
Netherlands	landings, age composition, no mesh size for beam, no special condition, only plaice, sole and cod
Portugal	landings, age composition
Spain	landings (no mesh size, no special condition), age compositions (5 species data; no division, quarter, metier, mesh size and special conditions)
UK England incl. Northern Ireland	landings, age composition update
UK Scotland	landings, age composition
Sweden	landings, age composition

Country	discards data 2007
Belgium	discards
Denmark	none
France	discard data not raised
Germany	discards, age composition
Ireland	none
Netherlands	discards, age composition (no mesh size for beam, no special condition), only plaice, sole and cod
Portugal	none
Spain	discards (only from otter; only divisions in VIIIc-IXa in 03-05, no quarter and special conditions), age composition (otter 11 species , only divisions in VIIIc-IXa in 03-05, no quarter and special
UK England incl. Northern Ireland	discards, age composition
UK Scotland	discards, age composition
Sweden	discards, age composition

Germany: Fleet specific landings and estimated discard data were provided for 2003-2007 derived from official logbook data bases covering all vessels ≥10m. The data do not include unallocated landings. The data for 2003-2006 submitted are consistent the data provided in 2007. The estimation of discards is based on about 20-30 observer trips per year and the ratio between observed catch and discard weights (sec 5.6). Age compositions of the landed or discarded catches are given where data were available and the sum of products-check (SOP) did not exceed ±25% of the assessed weight of the landings or discards. The data cover the areas defined in Annex IIA, i.e. Skagerrak, Kattegat, North Sea including the southern part of Division II in the EU-Zone and the Division VI to the west of Scotland. There were no demersal fisheries (mesh sizes ≥70mm) conducted in the Eastern Channel, the Irish Sea or the south-western Divisions. The data consider the aggregation by quarter, area, gear, mesh size, and existing derogations including special conditions of 8.1.a, 8.1.c, 8.1.d, 8.1.e and 8.1.f and species requested by the group including dab, anglerfish and lumpsucker. During 2000-2007, the fleets did not apply or have been eligible for other special conditions as confirmed by personal communication with the control and enforcement institute (BLE).

Ireland: Ireland provided fleet specific landings data for 2003-2007 derived from official logbook databases for all vessels ≥10 meters. The data covers all areas defined in Annex IIA in which the Irish fleet is active and conforms to the requested aggregation, of quarter, area, gear, mesh size, and species requested by the group. This data is not divided into special conditions, as Irish vessels have not applied for special conditions relating to this data call. Those special conditions applied for by Irish vessels relate to the allocation of additional days at sea for enhanced observer coverage. There is no quantitative information on misreporting. Revisions have been made to the 2003-2006 data provided to STECF-SGRST in 2008. These revisions result from a combination of data availability updates and database improvements carried out in the later part of 2007.

Irish landings age composition information from port sampling was made available for the time series within VIa, VIIa, VIIg, and VIIj. However, this data was not available with mesh size information. Therefore, their inclusion has been restricted to cases where a single mesh size range could be assumed. Thus maintaining mesh size information in the landings data. Annual information was provided in cases where sampling data was limited. This was then partitioned into quarterly information according to landed weights. This resulted in the inclusion of several beam trawl landing age compositions for cod, haddock, plaice, sole and whiting in VIIa and VIIg. Age compositions for whiting landed by demersal seines in quarter 3 of 2005 were also included. In relation to discards, annual information relating to otter trawls was available for areas VIa, VIIa, VIIg, and VIIj. Ireland's discard program is fleet based spanning all mesh sizes. As a result, too few samples were available within each of the mesh size groupings outlined within the data call to provide discard information by mesh size. As a result, no Irish discard information has been included by this group.

Netherlands: The Netherlands provided an update of landings and discards data of plaice, sole and cod for the year 2007. These data cover only beam trawls with a mesh size equal to or greater than 80 mm, and some without any mesh size information.

This inability to specify a more detailed mesh size range is due to the logbook data available not including landings per market size classes per trip. This information is needed to enable construction of landings age composition by defined segments of the fleet. Considering that about 80% of the Dutch demersal landings from the North Sea (mainly plaice and sole) are from beam trawls with engine power larger than 300 HP fishing with an 80mm mesh size, it is usually assumed that the age composition derived from port sampling is representative of the total landings for this area. This assumption was also made by STECF-SGRST to allow for a comparison with other countries' data. Therefore, the catch allocated to beam trawls in the North Sea with a mesh size ≥80 mm or without mesh size information were assigned a mesh size range of 80-89mm. Landings were given for sole, plaice and cod.

Dutch discard information was provided for the beam trawl fleet with a mesh size range of 80-89mm in area … for three species: sole, plaice and cod. Discards for sole and plaice were raised to fleet level using the ratio of days at sea*HP sampled to the total days at sea*HP made by the fleet. Cod discards for 2003-2004 were raised using number of trips sampled to total trips made by the fleet. The numbers discarded at age were calculated based on an annual age length key, provided by port sampling and surveys.

In 2006, ten trips were sampled in the framework of the discards sampling programme of the Dutch beam trawl fishery in the North Sea. Nine trips were on board beam trawl vessels larger than 300HP fishing with 80mm cod-end mesh size. One trip was on board a German otter bottom trawl vessel larger than 300HP fishing with 80mm cod-end mesh size. The spatial distribution of fishing effort of the Dutch beam trawl fleet larger than 300HP fishing with 80mm cod-end mesh size was similar to the effort distribution in the discard sampling. Samples of the discards and landings were counted and measured, and raised to catches per hour, per trip, per quarter and per year.

Sampled numbers of fish per haul were raised to numbers at length, and for some species at age, for both discards and landings. Different raising procedures were used for discards and landings because different sources of information were used for these catch components. For the landings the total landed weight per species by trip was available from the auction, while such data was not available for discards. Discards were raised from sampled numbers in a haul to total numbers in a haul with the ratio of estimated haul volume to sampled haul volume. Total numbers per haul were summed over all sampled hauls in a trip and divided by duration of the sampled hauls to obtain total numbers discarded per hour per trip. Numbers were converted to weight using standard length-weight relationships. Landings were raised from sampled numbers per haul to total numbers per trip with the ration of total landings weight in the trip to sampled landings weight. Total numbers landed were calculated by dividing total numbers in the trip by the trip duration. Landed weight per hour was calculated by dividing total landings weight by trip duration. Average numbers landed and discarded at length per trip were then calculated per period (quarter or year) by summing the numbers at length per hour over the number observer trips in this period and dividing this by total number of trips in this period. Numbers at age were calculated from numbers at length using age-length keys, which calculate the proportion of fish at length (l) with age (a). Numbers at age landed and discarded are raised to fleet level by effort-ratio: multiplying total numbers at age in the sampled trips with the ratio of hpeffort (effort in days at sea multiplied by the engine power of the vessel in HP) of the fleet to hpeffort of the sampled trips (Helmond and Overzee 2008).

Cod discard numbers for 2005 were raised by two alternative methods: (1) using the ratio of days at sea*HP sampled to the total days at sea*HP made by the fleet, and (2) using the ratio of landings weight sampled to the total landings weight of the fleet. Results with the second method were sometimes lower, but usually much higher (up to 8-fold), than with the first method. The tables and graphs in this report use the data as raised by the first method, which was chosen because these data were more consistent with the data as provided in 2005. Discard data provided by the Netherlands are derived from the IMARES discard sampling program, sampling only very few trips (10) per year. However, in 2004 the industry started its own discard sampling program (sampling plaice discards, and since 2006 also cod discards) with a much higher coverage. These data have been analysed by IMARES for various purposes. Unfortunately, these data were not ready in the right format to be used for the current report. It is important to state that the cod discard data is derived from very few observations (9 fish in 2003, 35 in 2004, and 38 in 2005). As a result the data are highly variable and therefore conclusions drawn on these data should be considered with great care. These data are intended only to provide an approximate indication of fleet catch compositions.

Portugal: No expert of Portuguese fisheries attended the meetings of STECF-SGRST in 2008 . However, Portugal provided landings data for 2004-by quarter and year in the required data format for the areas 8c and 9a where the Portuguese fleet operates. Portugal did not provide discards data due to difficulties with the estimation procedure and the short time period of the discards sampling program. Age disaggregated landings were provided for hake, as well as for horse mackerel, mackerel, Spanisch mackerel and blue whiting. The information refers to all fishing vessels with overall length ≥10 m, licensed for the period 2004-2006. The gear categories and mesh size provided were in agreement with the data call and Annex IIB, gillnet with mesh size >60mm, otter trawl with mesh size >32mm and bottom longlines. However, no mesh size information could be provided for significant parts of the fleets deploying the gears defined and contributing significantly to both hake and *Nephrops* landings. In the case of trawl, the unknown mesh size means that although the mesh size is greater than 32 mm, it is not possible to specify according to the categories defined by this working group, but their landings can be taken into account. The same is not applicable to the gillnets with unknown mesh size. This resulted in a high proportion of gillnet landings which could not be assigned to the defined derogations and therefore were grouped as unknown (none). Special conditions have been provided for a mixed passive gear category (“PGP”), that includes vessels that operate with more than one gear. Although this group includes unregulated gears (trammel nets, traps, dredges, etc.) and regulated gears (longlines and gillnets) affected by the special conditions, it was not possible to consider the gear specific landings in the evaluation and they were added to “none”. The trawl fleet was further allocated to two fisheries, targeting crustaceans operating in area 9a or targeting demersal fish operating in areas 8c and 9a.

Spain: Fleet specific landings data were provided for 2003-2007 derived from official logbook databases for all vessels ≥10 meters. Data include all trips (with and without landings of hake), species and Spanish landings in other Member States. The data covers ICES Subarea VII and ICES Divisions VIIIc and IXa (without Gulf of Cádiz in 2006 and 2007) conforms to the requested aggregation, by quarter, ICES Division and gear. Mesh sizes ranges and special conditions information was not available. The eleven Spanish gear categories were: BEAM (Beam trawl), DEM_SEINE (Danish and Scottish seiners), DREDGE (Dredges), GILL (Drift and fixed Nets except Trammel

Nets), LONGLINE (Longlines in VII, Bottom Longlines in VIIIc and IXa), OTTER (Bottom trawl), PEL_SEINE (Pelagic seine and purse seine), PEL_TRAWL (Pelagic Trawl), POTS (Pots and traps), TRAMMEL (Trammel Nets) and NONE-N/A (unidentified gears). 2003-2007 landings age compositions from otter, gillnet and longline hake and from otter megrim of VII, VIIIc and IXa were provided. In VIIIc and IXa, 2003-2007 otter four-spot megrim, 2003-2006 otter blue whiting and IXa 2007 gill and otter pouting ages were available. Ages data were by year (by six months for blue whiting), but not by quarter, mesh size, special condition, metier and Division (only for 2007 VIIIc-IXa hake and pouting ages), therefore data were not incorporated to the database. Discards weights and ages were available for OTTER from 2003-2007 by year, mesh size and metier but not by ICES division (only for VIIIc-IXa in 2003-2005), quarter and special conditions, therefore no discards estimates are included in the database (see below).

Sweden: Sweden provided catch data in the required data format for cod, *Nephrops* and plaice for the years 2003-2006, by quarter, for the areas: Skagerrak and Kattegat. However, as the by-catch data for other species could not be identified by quarter, all Swedish catches were assigned to be taken during the first quarter. STECF-SGRST notes that this data manipulation prevents any analyses by quarter. Age distribution data were provided for cod, plaice and *Nephrops* (both for the retained and the discarded part of the catch). Data for special conditions were available only for special condition IIA81b in Skagerrak for 2004, 2005, 2006 . The gear categories used for are otter trawl 90-99mm, split into *Nephrops* - demersal fish and *Nephrops* trawl with sorting grid (IIA83b). For 2006 data covered the gear category of gill nets of the mesh size range 110-149mm. Mesh sizes were stratified according to requirements. No catch data were provided for vessels <10m. In Sweden, landings of cod were prohibited during parts of 2003, 2004, 2005 and 2006 which resulted in discard of adult cod. There is no information on misreporting.

In 2007 sweden provided catch data for the special condition aiii AII 83a, (90 mm trawl with 120 mm square mesh panel).

UK (England, Wales and Northern Ireland): The raising procedure used by the UK (England, Wales and Northern Ireland) for 2008 has changed significantly from previous years and data have been reworked for the entire period of 2002-2007.

Landings and effort data were retrieved by The UK Marine Fisheries Agency (MFA) on a year, quarter, species, area, gear, mesh, special condition basis. Length compositions for the landings and discards came from the discard sampling. Comparisons of the length compositions from the market sampling and the discard sampling programmes for the major stocks showed generally good correspondence. There is no guarantee that either the market sampling, or the discard sampling gives the “true” LD.

ALKs for landings were created on a year, quarter, species, area basis from the market sampling data. The same strata were used for discard ALKs but the data came from the discard sampling programme. Annual versions of the ALK (i.e. year, species, area) were created for filling in missing values.

Missing values in the retained portion of the ALK (i.e. lengths observed for which no age data exist) were filled first using the annual retained ALK, then the quarterly discard ALK then the annual discard ALK. Missing values in the discarded portion of the ALK were filled using the annual discard ALK, then the annual retained ALK. Strata were only considered to have sufficient age data if more than 80% of the fish measured had associated ages. Those strata with less than 80% aged result in the provision of landings and discards biomass only. In those strata considered well aged, lengths for which there was no associated age were ignored. Numbers retained and discarded at age were raised up such that the retained biomass equalled the landings recorded in FAD (the official system for recording landings information in England and Wales. Discard data were also ignored if the retained biomass of a strata was less than 0.02% of the total landings – these strata are presented with landings biomass only. For those stocks with no observed discards (or insufficient data), the final table contains only landing information.

UK (Scotland): Landings data were provided for the years 2003-2007 for all species caught by Scottish vessels specified in the STECF data requirement, including: cod, haddock, whiting, saithe, monkfish, plaice, sole, *Nephrops*, lumpsucker, turbot and dab. The data does not include landings with no matching effort data for the voyage, though if there is any effort data for the voyage, matching effort records are imputed for all landings. The data conforms to the aggregation by quarter, area, gear and mesh size as set out in the data request. Fisheries are defined using a combination of gear, mesh size and fishing area as set out in the STECF data requirement. Landings and discard numbers at age were derived from market sampling and discard sampling data. This data is stratified by west coast (division VIa) and east coast (sub area IV). If data was from landings from one of these two areas and if the gear category could be matched to FRS specific gear codes catch and discard numbers at age were supplied for cod, haddock, whiting and saithe. For landings from other areas (including all areas in Southern Shelf waters), other types of gear, and in all cases for other species, only landed weight was provided for the given category. Landing numbers at age were calculated from (landed weight in the record * proportion of quarterly landed weight represented by age A)/(mean weight-at-age A). Discard numbers at age were calculated from (landed weight in the record * proportion of quarterly discarded weight represented by age A * ratio of quarterly discards to landings)/(mean weight of discards at age A). The market and discard sampling data files are only produced according to the following categories

- MTR: Motor trawl (bottom trawls, boat length >= 27.432m, targeting demersal species)
- LTR: Light trawl (bottom trawls, boat length < 27.432m, targeting demersal species)
- PTR: Pair trawl (all pair trawls targeting demersal species)
- SEN: Seine nets (single and pair)
- NTR: Nephrops trawls (all trawls targeting Nephrops)

Therefore, even though landed weights are differentiated according to the data specification of this sub-group no distinction can be made between mesh size categories in terms of proportions at length and proportions at age in the landings and discards, or between mesh size categories in terms of the ratio of discards to landings. In addition, age-length keys are pooled for LTR, NTR and SEN such that the age/length relationship will be common across these gears. Currently Scottish discards are raised using a stratified ratio estimator, with the strata being defined by gear type, area (i.e. areas defined in the Scottish market sampling scheme) and quarter (January – March, April – June, …). The auxiliary variable used in the ratio estimator is species landings. Due to the expensive nature of discard sampling many strata are unsampled. This problem is overcome by ad-hoc fill in rules – inshore light trawl data might be used to fill in an empty inshore *Nephrops* trawl stratum for example. The estimates of discards for each stratum are then summed to give an estimate of total discards, by area and gear if required. There are known problems, however, with bias and imprecision with this method. For comments on incorporation of special conditions see the UK (Scotland) paragraph under section 5.5.2.

5.5.5. Fleet specific landing and effort data 2003-2007 of small boats (<10m)

Belgium: Belgium did not provide any information for vessels under 10m.

Denmark: Landings and effort data for vessels less than 10m were made available by Denmark in the same format as for larger vessels. Vessels of size less than 10 m are included in the general Danish vessel register database together with the vessels > 10 m (for which logbooks are mandatory). Landings from the small vessels are however recorded through a sale slips register as for vessels > 10 m, and information on the effort of vessels < 10 m is provided through declarations of which area the fishing trip took place ("farvandserklæring"). The level of effort is estimated as one fishing day per registered trip, as most vessels engage in day-trip fishery. This is the basis for the data on landings composition and fishing area by these vessels. Gear and mesh size is often missing, and no information is provided on the ICES rectangle level. On a national scale, the number of small vessels registered in the database has been fairly constant around 850 vessels since 2000, while in comparison the number of vessels larger than 10m has decreased regularly from 1100 vessels in 2000 to 760 in 2006.

France:

France provided data for vessels under 10 m for the period 2003 to 2007. All vessels registered in the national Fleet Register have to submit a declaration. Small vessels less than 10 meters are not obliged to complete logbooks but they have to submit a monthly form. These data are stored in the national data base in the same way as for other vessels (> 10 meters).

Effort data are calculated from declarative sources listed above. They were validated by cross-checking with a national sampling for monthly activity calendar. All fishing vessels are sampled directly or indirectly to assess the metiers they have done during the previous year.

Nominal effort (kW*days) by French vessels under 10m for the period 2003-2007

YEAR	AREA	DREDGE	GILL	LONGLINE	N/A	OTTER	PEL_SEINE	PEL_TRAWL	POTS	SMALL_BEAM	TRAMMEL
2003	4		660			55			674		76189
	7D	24193	79840	12534	8606	288903		1407	99411	59088	303324
	7E	179032	208583	138863	6789	167216		180	520261		157153
	7H	336	183	115		212			61		81
	7J	180									180
	8A	24130	129206	28029	221300	191537	176	3385	10212		83151
	8B		101481	21321	21910	346			527		19141
2004	4		816	8231					3439		65091
	7D	36756	68265	16966	5786	294604		216	105884	69134	268211
	7E	178565	235939	173869	3490	169078	182		796241	8835	129954
	7H	1692	273						705		244
	8A	15020	119362	52222	225076	229963		533	8081		98357
	8B	235	88173	23344	32693	2176			636		27937
2005	4		110	5543				2262	103		49929
	7D	43240	96327	24351	7999	210170		5862	116235	59956	283335
	7E	144211	220804	176447	3952	163002		1411	627951		148076
	7H	690	570	803					427		183
	7J							2248			
	8A	16709	143051	61747	188280	172425		2622	15582		88974
	8B	270	130520	13182	32260	3672		1584	568		23658
	8C							920			
	8D		48					2503			
2006	4		332			5686					30641
	7D	50155	100259	46501	1797	253729		3172	132432	45032	386320
	7E	173389	220181	270289	2040	163280	210		674547		169198
	7H	442	234	592					1421		1155
	7J		140								
	8A	16665	236473	290114	171970	374791		2146	77239		297676
	8B	1805	150528	45886	42191	16305		1382	5520		100783
2007	4		774			14910					25034
	7D	24436	103685	43250	5118	226704		10235	137871	44311	327400
	7E	128226	189901	198591	3608	79309	42	1440	640449		226090
	7H		153	113							
	8A	15621	232720	420298	235135	492536			80645		351459
	8B	1643	166561	44990	29064	27394		66	6871		81940

Landings (T.) by area by French vessels under 10m for the period 2003-2007

Year	Area	Dredge	Gill	Longline	N/A	Otter	Pel.Seine	Pel. Trawl	Pots	Small Beam	Trammel
2003	4		1			0			3		90
2003	7D	874	240	28	4	264		13	255	137	511
2003	7E	3280	398	200	7	271		0	6036		265
2003	7H	2	1	13		3			0		5
2003	7J	2									0
2003	8A	183	214	70	48	177	3	51	20		82
2003	8B		182	37	6	1			2		82
2004	4		3	7					8		93
2004	7D	1136	194	38	1	345		12	341	137	434
2004	7E	4493	492	286	4	446	0		7485	7	244
2004	7H	7	0						1		0
2004	8A	113	178	146	24	213		2	20		185
2004	8B	5	211	59	6	43			3		93
2005	4		0	6				2	0		57
2005	7D	746	213	53	5	238		20	448	113	414
2005	7E	3319	334	226	1	203		5	5807		227
2005	7H	7	1	1					1		0
2005	7J							61			
2005	8A	177	174	149	27	133		27	17		122
2005	8B	2	252	43	8	29		19	4		41
2005	8C							17			
2005	8D		0					66			
2006	4		0			6					38
2006	7D	416	230	82	0	327		7	717	66	458
2006	7E	4056	459	311	9	167	0		5536		186
2006	7H	4	1	1					12		3
2006	7J		0								
2006	8A	217	278	561	15	308		9	79		316
2006	8B	71	220	81	3	45		7	68		130
2007	4			6		17					16
2007	7D	204	238	64	1	285		10	942	72	575
2007	7E	2704	327	212	1	89	0	1	5752		228
2007	7H		0	0							
2007	8A	93	270	679	20	412			62		346
2007	8B	6	198	87	2	44		0	65		228

Germany: Germany provided aggregated data regarding the fleet of vessels <10m. The data cover landings by area and species and effort in terms of number of vessels. However, no mesh size information is available from the landings declarations given in the years 2004-2007. The data are evaluated in section 6.7.2.

Ireland: Ireland provided data for small vessels of less than 10 meters in length for the period 2003-2007. Attempts are underway to construct an accurate list of these small vessels, which at present stands as approximately 1284 registered vessels, of which around 600 or so hold polyvalent pot licences.

Vessels less than 10 meters are not legally required to complete logbooks, therefore data of limited detail is available. Landings data from Irish vessels under 10 meters are obtained from monthly reports. These reports provide the species live weight by ICES area landed into ports each month. No vessel, gear, or effort information is recorded. There is some doubt as to the accuracy of these monthly reports. However, landings show the main species landed by <10m vessels to be non-TAC, shellfish species. In terms of sampling programs, there are no long-term specific programs like those for over 10 meter vessels. This is partly due to the insignificant landings of TAC species, as well as issues relating to onboard sampling staff safety. However, studies are carried out on specific species or sections of the inshore fleet, including lobster and brown crab, or activity patterns of vessels from certain ports. Landings data are given in aggregated formats within each of the Annex IIA area sections for which landings are recorded for the Irish under 10m vessels.

Monitoring of effort by the small inshore vessels presents difficulties as fishers are not required to record their effort. However, the majority of these small vessels have a daily fishing pattern, leaving at dawn and returning in the afternoon of the same day to land their catch. These are primarily artisanal vessels, not equipped to hold fish on board for long periods. Gear choice of these small vessels is influenced by both home port and local available stocks. The principal methods of the inshore fleet are passive, particularly pots. However, other gears are used including otter trawls and shellfish dredges. The under 10 meter vessels exploit the territorial sea and coastal waters, operating within the ICES areas adjoining the Irish coast (VIa, VIIa, VIIb, VIIg and VIIj).

No information regarding small boats <10m was provided by the Netherlands.

No information regarding small boats <10m was provided by Portugal.

No information regarding small boats <10m was provided by Spain.

Sweden: Effort and landing data for vessels less than 10m were made available by Sweden in the same format as for larger vessels. Vessels <10 m that are using trawl and demersal seines are obliged to use the same logbook as larger vessels. Vessels <10m using other gears are using the “coastal fishing journal” which predominantly follows the same structure as the standard logbook. Sweden reported landings on Nephrops, Cod and Plaice for vessels (<10m) for 2003-2007.

UK England, Wales and Northern Ireland: Data on catch and effort for under 10 m vessels are made available for UK vessels (including England, Wales and Northern Ireland). However, the effort data in particular are likely to be incomplete as there was no obligation for vessels to report effort before mid-2006.

UK Scotland: Effort data for Scottish vessels <10m were made available to STECF-SGRST. The effort data for 2000-2007 are given in a format consistent with the data submissions for bigger boats. Prior to the introduction of UK legislation known as the Register of Buyers and Sellers (RBS) for shellfish in Scotland in early 2006, some effort catching shellfish using POTS and Shell fishing by hand appears to have been under-recorded but the data for effort by other gears (those regulated for vessels >10m) shows no change in trend consequent on the introduction of RBS and therefore can be assessed as being complete in earlier years. However, the effort data supplied for Scottish registered vessels will exclude voyages landing into ports in England and other non-Scottish areas of the UK. Data on number of vessels per category has been supplied. Scottish under 10m boats are known to use more than one type of gear on individual trips or within a quarter, however and multiple counting of boats is therefore significant. The landings data for 2003-2007 are given in a format consistent with the data submissions for bigger boats.

Although UK(Scotland) carry out a stratified sampling observer programme based on gear, area and quarter, no specific consideration is given to estimating discards for vessels in the category of less than 10 metres in length. Vessels in this category are classed in the same groups as vessels over 10 metres in length based on the fishing method rather than vessel size. For a variety of reasons, including Health and Safety, discard sampling staff tend not to sail on vessels in the under 10 metre category.

In 2003 the Scottish Fisheries Statistics showed landings of the main commercial demersal species from vessels in the <10 metre category operating in Scotland to be below the level where the sampling intensities as defined in Appendix XV (Section H) of regulation (EC) 1639/2001 (Table 2) requires sampling to be carried out. A pilot study conducted in 2004 comparing a <10m vessel and >10m vessel using trawl gear and targeting *Nephrops* concluded overall weight discarded per hour was very similar between the vessels. As a consequence regular sampling of the <10 metre category in relation to landings and discards of Nephrops are conducted but the estimation of demersal discards for this category is based on the assumption that all vessels targeting *Nephrops* and operating in the same sampling area have the same catching and discarding characteristics.

5.6. Estimation of fleet specific international landings and discards

The estimation of fleet specific international landings and discards is based on linking the information about fleet specific discards and catch and discards at age among countries and replacing poor or lacking values with aggregated information from other countries.

Reported data by country are aggregated by fleet properties and raised to the officially reported landings or discards in the SGDFF 2004 (ICES 2004) format. Fleet definitions are based on area, year, quarter, gear, mesh size groups, special conditions as defined in Council Reg. 41/2007 Annexes 2A-C and national fisheries (metiers) definitions.

The data management and estimation procedures follow the simple raising strategies outlined below :

- Data management:

  The fleets are classified to their management areas, years, quarters and effort regulated gear groups disregarding the countries and fisheries (metiers).

- Estimation of discard rates by fleet (DR):

  Let the following notation be: D=discards, L= landings, *snf* = sampled national fleet, *unf* = unsampled or poorly sampled national fleet.

  A poorly sampled fleet is defined as such when $SOP_{snf} < 0.75$ or $SOP_{snf} > 1.25$

  The available landings and discards are aggregated (summed) by fleets and mean discard rates are calculated:

  $$DR = \frac{\sum_{snf} D_{snf}}{\sum_{snf} (L_{snf} + D_{snf})} \quad \text{with} \quad D_{snf} \geq 0 \text{ and} \quad \text{with} \quad L_{snf} + D_{snf} > 0$$

  otherwise 0 (means no catch)

  Fleet specific discard amounts are calculated when no discard information is available by

  $$D_{unf} = \frac{L_{unf} .DR}{(1 - DR)} \quad \text{when } D_{unf} \text{ is null (empty)}$$

  Fleets without any discards information remain as such.

- Estimation of landings in numbers and mean weight at age for non or poorly sampled national fleets

  Let *i* be the age reference

  Landings in numbers ($N_{snf,i}$) and mean weight at age ($W_{snf,i}$) are aggregated by sampled fleets when $SOP_{snf} \geq 0.75$ and $SOP_{snf} \leq 1.25$.

  Raising of numbers and mean weights at ages 0-11 to non or poorly sampled fleets by

$$N_{unf,i} = \frac{\sum_{snf} (N_{snf,i}).L_{unf}}{\sum_{snf} L_{snf}}$$

$$W_{unf,i} = mean(W_{snf,i})$$

The mean weights are unweighted and an appropriate weighing procedure, i.e. number of fish measured, should be explored.

Fleets without any landings at age information remain as such.

- Estimation of discards in numbers and mean weight at age for non or poor sampled fleets

  Discards in numbers ($N_{snf,i}$) and mean weight at age ($W_{snf,i}$) are aggregated by sampled fleets when SOP$_{snf}$ ≥ 0.75 and SOP$_{snf}$ ≤ 1.25 along the same procedure as for the landings.

Raising of numbers and mean weights at ages 0-11 to non or poorly sampled fleets by

$$N_{unf,i} = \frac{\sum_{snf} (N_{snf,i}).D_{unf}}{\sum_{snf} D_{snf}}$$

$$W_{unf,i} = mean(W_{snf,i})$$

The mean weights are unweighted and an appropriate weighing procedure, i.e. number of fish measured, should be explored.

Fleets without any landings at age information remain as such.

An example of this raising procedure is given in Table 15.2.3.2 under the header "Discards", the values between parenthesis are the estimated values.

- Catch at age estimation including discards

  Catches by fleets are estimated as the sum of landings and discards. Missing discards are ignored.

  Catches at ages 0-11 in numbers are estimated as the sum of landings at age in numbers and discards at age in numbers. Missing discards are ignored.

  Mean weights at ages 0-11 are estimated at weighted means (according to ratios of landings at age and discards at age to catches at age).

Finally, all fleets' catches and catches at ages in numbers and mean weights are aggregated finally over management areas, years and effort regulated gear groups.

Fleets without any information on discards or landings at age and discards at age remain unchanged and need to be raised separately on an agreed basis in case that they constitute significant landings.

The STECF-SGRST notes that sampling of catch at sea including discards is expensive and difficult. This means that sampling coverage tends to be rather limited, and estimates of discards are subject to high uncertainty. This is true of all the discard data used here, and in some cases the discard estimates presented represent the first attempt to use the discard data from some fisheries in an advisory context. Where the coverage is considered adequate to estimate the overall catch compositions of specific fleets these are presented, but they are intended only to provide an approximate indication of fleet catch compositions. In cases where there are little data, the estimated discard rates may be biased and imprecise (Stratoudakis *et al.*, 1999). The mean weights are estimated as unweighted means. This results in a biased estimate. An appropriate weighing procedure, i.e. number of fish measured, should be explored.

STECF-SGRST further notes that the approach of discard estimation applied is generally consistent with the method used in the discard estimates published by the FAO (Kelleher, 2004). However, the group also notes that the design of a discard sampling scheme might differ depending on whether the objective was to estimate total discards, or discard for specific fleets. In the current context estimates from sampling schemes designed for the former purpose are being used for the latter purpose which again means the estimates should only be used with caution. Where this is the case, comparisons are made between the estimates of total discards used for assessment purposes, and the fleet-specific estimates used here.

With regard to age composition data, STECF-SGRST notes that the analyses presented here are intended to quantify the catch compositions of the various fleets and gears of interest. For this purpose it is the species compositions and the estimated landings and discards that are of primary importance, with the age compositions being only of secondary importance. Applying the age compositions to the national catches by fleet and gear is a complex process not least because it typically involves considerable filling-in to account for categories which do not correspond to those within national sampling schemes. It would make any future data compilation and analyses much more efficient if age composition data were not required. While there is clearly a trade-off between efficiency on one hand and providing additional information on the other, the group notes that in the current context the age composition data add little information. As a result it proposes that any future data requests and analyses should be restricted to age-aggregated information.

5.7. *Treatment of CPUE data*

STECF-SGRST notes that CPUE series are often interpreted and used as stock abundance indicator. However, STECF-SGRST emphasises that the presented trends in CPUE by fleets are subject to selective fishing strategies (area, gear, mesh size etc.) and thus maybe biased. On the other hand, CPUE derived from targeted fisheries may provide very useful information on stock abundance trends. Furthermore, it must be taken into consideration that the majority of the CPUE trends represent only overall weights in the landings (LPUE) without discards or with poorly estimated discards. Ideally, the CPUE should be based on age disaggregated abundance rather than overall weights and reflect technological creep when trends over longer periods are evaluated. Time constraints prevented STECF-SGRST from estimations of CPUE trends by age and full evaluations of these. STECF-SGRST recommends that CPUE in units of numbers at age/(kw*days) be estimated and compared with the recent assessment results provided by ICES.

STECF-SGRST presents CPUE by derogations in units of g/(kW*days) Where discard estimates are not available, the trends in LPUE (landings per unit of effort) are given in the same units**. STECF wishes to stress again that great care should be used in the interpretation of these data owing to the incomplete nature of information on discarded fish.**

5.8. *Ranking of gears on the basis of contribution to catches*

STECF-SGRST presented the ranked contributions of the individual derogations pertaining to Annex IIA of Coun. Reg. 40/2008 to cod, plaice and sole catches for the years 2003 to 2007. There was discussion about whether the ranking should be based on a single recent year (possibly reflecting the most up to date importance of the different gear types in contributing to mortality of these species) or an average for a range of years (which allows for any aberrations in the series). A decision was taken to rank according to 2007. The data for other years are available for alternative analysis in the background spreadsheets .

The catch estimates are based on the sums of the landings and discards where available. STECF-SGRST considers the catch estimates as uncertain where derogations lack discard estimates or they are poorly sampled. The ranking according to catch in numbers only considers derogations for which catch in numbers are available. **STECF wishes to stress again that great care should be used in the interpretation of these data owing to the incomplete nature of information on discarded fish.**

5.9. *Summary of effort and landings by 'unregulated' gears*

In the summary tables of effort (for example in Section 6.2) the 'none none' category represents i) unregulated gear types and mesh sizes in addition to ii) unidentified mesh sizes. STECF has attempted to provide a break down of the main gears within this category (for example in Section 6.6 for Annex IIA) in effort (kW*Days at sea), cod catches, plaice catches and sole catches. This analysis should help to identify any gears contributing significantly to landings of these species but which are not currently regulated.

This is the first year for which detailed analysis of this type has been attempted and following completion of the tables in the report, some inconsistencies were identified which need to be investigated. For this reason some care is required in interpretation of the data until any required amendments are completed.

It is important in making use of the data in this report, that the ‘none none’ material is not counted more than once. It would be preferable to use data from the sections covering unregulated gears.

5.10. Presentation of under 10m information

This STECF-SGRST reportprovides an overview of landings and effort data provided by the experts regarding their national fisheries of vessels <10m, which are not obliged to report their landings through logbooks but rather do landings declarations.

Previously, information on vessels <10m has been provided in the STECF SGRST reports only as a series of individual country reports describing activities and landings. In this report individual country information is again provided where available – new information is provided from several countries. An attempt is also made to compile available information for each area into overall figures. Since not all countries were able to fulfil this part of the data call, the aggregate estimates for each region of the cod recovery zone must be considered as minimum estimates. Nevertheless, they begin to give an idea of the scale of landings contributed by these smaller classes of vessel.

5.11. Presentation of spatial information on effective effort

STECF-SGRST notes that minimum geographic resolution in the available logbook information on landings and effective effort is by ICES rectangle and considers analyses to only be possible at that resolution at the present time. The effective effort values of certain nations were given in days fished which were then converted to trawled hours by applying a factor of 24. STECF-SGRST notes that only major changes in the geographical distribution patterns should be given attention given the imprecision of the created data set. A full set of figures is availabale electronically but a selection of key gears is included in this report.

Figures use a common scale across years for a given category (e.g. 4.a.ii. none) but scales are unique to each category such that the colours assigned to statistical rectangles for category 4.a.ii. none can not be compared directly to those assigned for category 4.a.ii.IIA8d say. Figures use a percentiles scale, i.e. number of data values found in each colour band is the same. This is after data values across all years have been combined for that category.

5.12. *Effort management categories and DCR metiers*

ToR 6 requires a consideration of the relationship between the gear categories as defined in relation to the existing effort management regime, and the metiers defined by STECF SGRN in relation to the revision of the data collection regulation (DCR). At present these represent two rather different systems for classifying fishing activity. Specific requirement in this TOR is to identify situations where one metier adequately describes several effort categories (in other words there is redundancy in the effort management categories) and also cases where one effort category includes more than one metier and in so doing masks important detail.

STECF SGRST spent some time discussing this issue and describes below the different systems for classifying fishing before discussing ways to bridge the gap between them. Given the time available, the group was not able to fully address the TOR but for two of the areas in Annex IIA (Irish Sea and West of Scotland, has made an attempt at a closer examination of the relationship between effort management categories and metiers with a view to identifying where improvements could be made and redundancy reduced.

Vessels subject to effort management regulations are assigned to categories based on the gear type and mesh-size of their gear. The allocation of number of days at sea is then based on gear category, area fished, and on whether the vessel qualifies for any special conditions which allow additional days. For example, vessels fishing with trawls or demersal seines with mesh size of 120mm or above (gear 4av) in the North Sea (area 2b2) in 2008 were allocated 86 days at sea during 2008. If they used a 140mm square mesh panel (special condition 8.3(j)) this allocation was increased to 115 days. While no target species are specified for this gear type in the effort regulations, the basic EU technical measures regulation (850/1998) includes catch composition rules that specify the maximum percentages of different species that may be landed when using each gear/mesh size combination.

As a move towards a fishery-based approach to data collection, STECF SGRN has developed a classification system for fishing activity based on the concept of metiers. Appendix 2 provides an example of this concept in its description of French metiers. The STECF SGRN system, known as the Nantes matrix, involves a number of different levels such that each level provides a more precise description of fishing activity. For example, level 2 is gear class (e.g. trawl); level 3 is gear group (e.g. bottom trawl); level 4 is gear type (e.g. bottom otter trawl); level 5 is target assemblage (e.g. mixed crustaceans and demersal fish), then level 6 describes the mesh size and any other selective devices in use. Under this system, any fishing trip can be allocated to one of these metiers based on the gear used and the species composition of the resulting landings.

From the above descriptions, it is clear that the DCR matrix represents a much more detailed approach to describing fishing activity than the effort management categorisation. In particular, the DCR approach involves more detailed information on gear type (i.e. the ability to distinguish between, e.g. pair trawls and single trawls) and also on catch composition (in relation to the different target assemblages). In contrast, the effort management categories include only information corresponding to DCR level three (gear group) and level six (mesh size & selective devices). As a result, an effort management category may include both multiple gear types and multiple target assemblages. The latter information is more critical, given that the intention of effort management is to protect specific components of the target assemblages.

In order to identify the correspondence between effort management categories and DCR métiers, it is necessary to review the effort management categories and identify cases where these may involve multiple gear types (e.g. single and pair trawl within demersal trawl) and/or multiple target assemblages. The review should also identify cases where special conditions associated with a particular grouping involve a difference in gear selectivity characteristics or target assemblage. An additional question relates to the uptake of special conditions. If, in practice, the amount of effort attributed to a particular special condition is negligible, then questions about whether that effort involves multiple gear types or target assemblages are rather academic.

Differences in catch composition when using the same gear, presumably reflect either differences in the area/season where the gear is used, or differences in the selectivity of the gear in practice. The latter can result from additional selectivity devices, such as square mesh panels, that in some cases are specified in special conditions as their use may result in an increase in the allocation of days at sea. It is harder to evaluate differences in the seasonal or spatial use of a gear, as the basic data in use are annual and spatially aggregated. However, to some extent, nation can be used as a proxy for area where the gear is used, as with some exceptions, the grounds fished by the vessels of a given nation, will be similar from year to year, and are typically adjacent to that nation's coastline.

As a first step to mapping the effort management categories on to the Nantes matrix DCR métiers, the following information could be tabulated:

- Gear category, e.g. 4av
- Special condition regulation e.g. 8.1a, including the baseline (i.e. no special condition)
- The conditions associated with that regulation, in this case the use of a 120mm square mesh panel
- Whether or not the conditions imply a difference in selectivity or catch composition
- Recent allocations of days at sea for the condition (to illustrate the extent to which these imply a separate fishery to the baseline
- Some indication of the nations involved, for instance the top three nations in terms of recent effort, and their percentage of the total
- Some indication of the total uptake of that special condition, for instance the percentage of recent effort by that gear aggregated across all special conditions.

As an illustration an example table for gear 4av in the North Sea, Skagerrak & Eastern Channel is given in Table X.1. A number of points emerge from this example. The large majority of effort by this gear (c. 91%) is not allocated to special conditions. Further, it is reasonably spread across different nations, so may well involve different catch compositions (though not necessarily different target assemblages). The most important special condition accounts for around 7% of the effort, and clearly involves a difference in target assemblage as it is involves a track-record requirement of less than 5% cod, plaice and sole. The next most important special condition only involves around 1.3% of the effort, and while it involves a small difference in selectivity (a 120mm square mesh panel) it is only really used by three neighbouring nations, so all may well be fishing a similar target assemblage. The other special conditions arguably involve negligible effort, and two of them are wholly Danish.

Based on this initial analysis there is clearly scope for further investigation of the baseline gear category (i.e. no special conditions) to determine the extent to which this category involves multiple gear types (i.e. pair trawling or multiple-rig trawls), and the most important special condition may also merit similar investigation. For the case of this North Sea example, it would also be relevant to look at the relative contribution of the North Sea, Skagerrak and Eastern Channel components to the overall picture.

The example table and summary given identifies the most important special conditions within a gear category in order that further analysis can determine whether these cover multiple métiers. It is unclear how the less important special condition categories should be treated without a clearer explanation of why these comparisons are required.

Table 5.12.1 Example gear categorisation

				Difference in :								
Gear	**reg**	**Conditions**	**Days 2006**	**Sel. ?**	**Species mix?**	**Top 3 nations and % of 2006 effort**						**Uptake**
4av	None	-	103	N/A	N/A	SCO	50.2%	DEN	31.9%	GER	11.6%	90.61%
4av	8.1(a)	120mm square mesh panel	103	Y	-	GER	48.6%	DEN	42.0%	SWE	9.4%	1.26%
4av	8.1(c)	Track record, <5% cod	160	-	Y	NIR	79.6%	ENG	19.0%	FRA	5.3%	0.13%
4av	8.1(d)	Track record, <5% cod+plaice+sole	365	-	Y	GER	53.7%	SCO	20.3%	ENG	17.5%	7.01%
4av	8.1(h)	Operating under a system of automatic suspension of licences	115	-	-	DEN	100.0%					0.03%
4av	8.1(j)	140mm square mesh panel	115	Y	-	DEN	100.0%					0.96%

6. REVIEW OF ANNEX IIA OF REGULATION 40/2008 IN THE CONTEXT OF THE COD RECOVERY PLAN (REGULATION 423/2004

6.1. General remarks

STECF-SGRST notes that assignment of derogations and special conditions is based on best expert knowledge and data availability. Data errors may exist taking into consideration the very large size of data bases involved, (a known example is allocation of special conditions when no gear group is specified). STECF-SGRST notes that table 1 of Annex IIA refers to special condition 4.c.iii.IIA8f but describes this as a special condition for gillnets and entangling nets with mesh size >= 220mm. Nets with this mesh size are defined under paragraph 4.c.iv.

The group emphasises that the assignment of some derogations and special conditions to the individual vessels (fleet aggregation) is based on its landings compositions in specified reference years but independent of its effort deployed in that fleet segment. Consequently, a vessel may be entitled to derogations including special conditions based on the landing composition of a single haul and thus realise certain flexibility in comparison with vessels with more constant activities.

Specific technical or gear configurations defined in the special conditions of the derogations are often not registered in the logbook databases, i.e. multi rigging, sorting or escapement devices (special conditions 8.1.a, b, j) or in-season management plans (8.1.d, h, i, k). STECF-SGRST notes that in-season information and fleet aggregations imply the direct involvement of the national control and enforcement institutions in the review process. STECF-SGRST recommends that to the fullest extent possible, national logbook data bases be made consistent with both the regulations defined in Annex IIA of the fishing opportunities regulation and the fleet-metier definitions defined under the revised data collection regulation (Council Reg. 199/2008).

STECF-SGRST notes that the West of Scotland management line defined in section 2.2 in Annex IIA of Council Reg. 40/2008 cuts statistical rectangles. This fact prevents precise allocation from logbooks of landings and discards to the cod recovery zone. A link between VMS data and logbook landings information by rectangles could contribute to a precise allocation. In the absence of VMS data assignments of vessels to fleets qualifying for special conditions based on historic landings compositions and evaluation of historic effort and catches west of Scotland must be considered over all statistical rectangles in ICES Division 6a including those beyond the Cod Recovery Zone. Further, the group considers the area placed under a recovery plan should encompass the full range of the stock and that this range includes those rectangles beyond the current Cod Recovery Zone.

STECF-SGRST notes the following changes in Annexes IIA to Council Reg. 40/2008 as compared to the Annex IIA to 41/2007:

- The option of a permanent observer to ensure compliance with the catch composition rules under special condition IIA8d made available in 2007 has been extended to include special conditions IIA8c, IIA8e, IIA8f and IIA8k also (paragraph 8.4). It is now explicitly stated that observers must be independent of the vessel owner and that the observer plan be submitted by the flag member state to the Commission for approval. The gear-mesh size combinations to which the special conditions apply are unchanged from 2007.

- Paragraphs 8.5, 8.6 and 8.7 outline the opportunity for member states to manage their fishing effort allocations according to a kilowatt days system. For any specific area and derogation (e.g. 4.a.iv.IIA8d in area 2d) the total kilowatt days deployed by vessels of the member state must not exceed that which would be allocated according to the normal days at sea limits but the effort limit allocated to individual vessels fishing within this area and derogation combination may be higher than the normal days at sea limit.

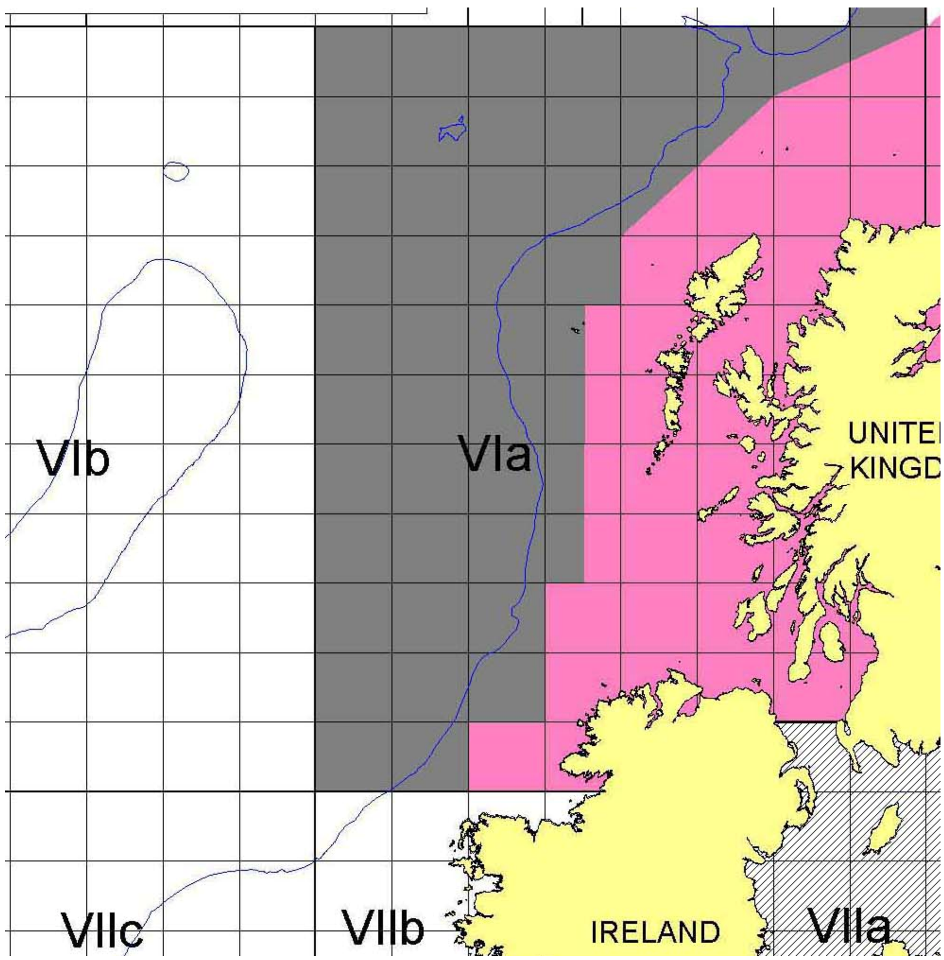


Figure 6.1.1 West of Scotland management line and 200m contour. In pink area to east of line days at sea restrictions apply to all vessels. In grey area to west of line vessels carrying VMS on board are not subject to days at sea restrictions.

The following Table 6.1.1 lists the historic developments of days at sea by vessel and derogations.

Table 6.1.1 Historic trends in days at sea by vessel specified in the Council Regulations since 2003.

Annex	AREA	REG GEAR	SPECON	2003	2004	2005	2006	2007	2008
IIA	2a	4ai	none	276	240	228	228	228	228
IIA	2a	4aii	IIA83b			252	365	365	365
IIA	2a	4aii	IIA83d		365	365	280	280	280
IIA	2a	4aii	none	300	264				
IIA	2a	4aiii	IIA83a			144	137	126	126
IIA	2a	4aiii	IIA83d		365	365	365	365	365
IIA	2a	4aiii	none	300	264	108	103	95	71
IIA	2a	4aiii deleted (2007)	IIA83b				365		
IIA	2a	4aiii new (2007)	IIA83l					132	132
IIA	2a	4aiv	IIA83a			144	137	137	137
IIA	2a	4aiv	IIA83c		168	156	148	148	148
IIA	2a	4aiv	IIA83d		365	365	365	365	353
IIA	2a	4aiv	none	108	120	108	103	103	103
IIA	2a	4av	IIA83a			144	137	137	137
IIA	2a	4av	IIA83c		180	168	160	160	160
IIA	2a	4av	IIA83d		365	365	365	365	365
IIA	2a	4av	IIA83h			120	115	115	115
IIA	2a	4av	IIA83j			144	149	149	103
IIA	2a	4av	none	108	120	108	103	103	103
IIA	2a	4ci	none	192	168	156	140	140	140
IIA	2a	4cii new (2007)	none	192	168	156	140	140	140
IIA	2a	4ciii new (2007) former 4cii	none	192	168	156	140	140	140
IIA	2a	4civ new (2007) former 4ciii	IIA83f		192	180	162	162	162
IIA	2a	4civ new (2007) former 4ciii	none	192	168	156	140	140	140
IIA	2a	4d	IIA83g				140	140	140
IIA	2a	4d	none	192	168	156	140	140	140
IIA	2a	4e	none	228	204	192	173	173	173
IIA	2b	4ai	none	276	240	228	228	228	228
IIA	2b	4aii	IIA83b				365	365	365
IIA	2b	4aii	IIA83d		365	365	280	280	280
IIA	2b	4aiv	IIA83c		168	156	148	148	148
IIA	2b	4aiv	IIA83d		365	365	365	365	365
IIA	2b	4aiv	none	108	120	108	103	95	86
IIA	2b	4av	IIA83c		180	168	160	160	160
IIA	2b	4av	IIA83d		365	365	365	365	365
IIA	2b	4av	IIA83h			120	115	115	115
IIA	2b	4av	none	108	120	108	103	96	86
IIA	2b	4ci	none		168	156	140	140	140
IIA	2b	4cii new (2007)	none		168	156	140	140	126
IIA	2b	4ciii new (2007) former 4cii	none		168	156	140	130	117
IIA	2b	4civ new (2007) former 4ciii	none		168	156	140	140	140
IIA	2b	4d	none		168	156	140	140	140
IIA	2b	4e	none		204	192	173	173	173
IIA	2b1	4aii	IIA83b			252	365	365	365
IIA	2b1	4aii	none	300	264				
IIA	2b1	4aiii	IIA83a			144	137	126	126
IIA	2b1	4aiii	IIA83d		365	365	365	365	365
IIA	2b1	4aiii	none	300	264	108	103	95	86
IIA	2b1	4aiii new (2007)	IIA83l					132	132

Table 6.1.1 continued.

IIA	2b1	4aiv	IIA83a			144	137	137	137
IIA	2b1	4av	IIA83a			144	137	137	137
IIA	2b1	4av	IIA83j			144	149	149	149
IIA	2b1	4ciii	IIA83f				140	140	140
IIA	2b12	4bi	none	180	168	156	143	132	119
IIA	2b12	4bii	none	180	168	156	143	143	143
IIA	2b12	4biii	IIA83c			156	155	155	155
IIA	2b12	4biii	IIA83i				155	155	155
IIA	2b12	4biii	none	180	168	156	143	143	129
IIA	2b12	4biv	IIA83c			168	155	155	155
IIA	2b12	4biv	IIA83e				155	155	155
IIA	2b12	4biv	IIA83i				155	155	155
IIA	2b12	4biv	none	180	168	156	143	143	129
IIA	2b12	4d	IIA83g				140	140	140
IIA	2b12	4d	none	192	168	156	140	140	140
IIA	2b12	4e	none	228	204	192	173	173	173
IIA	2b2	4aii new (2007)	none	300	264	252	227	204	184
IIA	2b2	4aii new (2007)	IIA83c					215	215
IIA	2b2	4aiv	IIA83a			144	103	103	103
IIA	2b2	4av	IIA83a			144	103	103	103
IIA	2b2	4ciii	IIA83f		192	180	162	162	162
IIA	2b23	4aii deleted (2007)	none		264	252	227		
IIA	2b23	4aiii	IIA83a				227	227	227
IIA	2b23	4aiii	IIA83d		365	365	280	280	280
IIA	2b23	4aiii	none		264	252	227	209	188
IIA	2b23	4aiii new (2007)	IIA83l					238	238
IIA	2b23	4aiv	IIA83a				103	103	103
IIA	2b23	4av	IIA83a				103	103	103
IIA	2b23	4av	IIA83j				115	115	115
IIA	2b23	4av new (2007)	IIA83jh					127	127
IIA	2b3	4aii new (2007)	none		264	252	227	221	199
IIA	2b3	4aii new (2007)	IIA83c					227	227
IIA	2b3	4av	IIA83a				103	103	103
IIA	2b3	4bi	none	180	168	156	365	365	365
IIA	2b3	4bii	none	180	168	156	365	365	365
IIA	2b3	4biii	IIA83c			156	365	365	365
IIA	2b3	4biii	IIA83i				365	365	365
IIA	2b3	4biii	none	180	168	156	365	365	365
IIA	2b3	4biv	IIA83c			168	365	365	365
IIA	2b3	4biv	IIA83e				365	365	365
IIA	2b3	4biv	IIA83i				365	365	365
IIA	2b3	4biv	none	180	168	156	365	365	365
IIA	2b3	4ciii	IIA83f				140	140	140
IIA	2b3	4d	IIA83g		240	228	205	205	185
IIA	2c	4ai	none		240	228	228	228	228
IIA	2c	4aii	IIA83b				365	365	365
IIA	2c	4aii	IIA83d		365	365	280	280	280
IIA	2c	4aii	none		264	252	227	204	184
IIA	2c	4aii new (2007)	IIA83c					204	204
IIA	2c	4aiii	IIA83a				227	227	227
IIA	2c	4aiii	IIA83d		365	365	280	280	280
IIA	2c	4aiii	none		264	252	227	227	227
IIA	2c	4aiii deleted (2007)	IIA83b				365		
IIA	2c	4aiii new (2007)	IIA83l					238	238
IIA	2c	4aiv	IIA83a				114	114	114
IIA	2c	4aiv	IIA83c		168	156	148	148	148
IIA	2c	4aiv	IIA83d		365	365	365	276	276
IIA	2c	4aiv	IIA83k				166	166	166
IIA	2c	4aiv	none		120	120	114	105	86

Table 6.1.1 continued.

IIA	2c	4av	IIA83a				114	114	114
IIA	2c	4av	IIA83c		180	168	160	160	160
IIA	2c	4av	IIA83d		365	365	365	365	365
IIA	2c	4av	IIA83h			120	126	126	126
IIA	2c	4av	IIA83j				126	126	126
IIA	2c	4av	IIA83k				178	178	178
IIA	2c	4av	none		120	120	114	114	114
IIA	2c	4av new (2007)	IIA83jh					138	138
IIA	2c	4bi	none		168	156	143	132	132
IIA	2c	4bii	none		168	156	143	143	143
IIA	2c	4biii	IIA83c			156	155	155	155
IIA	2c	4biii	IIA83i				155	155	155
IIA	2c	4biii	none		168	156	143	143	143
IIA	2c	4biv	IIA83c			168	155	155	155
IIA	2c	4biv	IIA83e				155	155	155
IIA	2c	4biv	IIA83i				155	155	155
IIA	2c	4biv	none		168	156	143	143	143
IIA	2c	4ci	none		168	156	140	140	140
IIA	2c	4cii new (2007)	none		168	156	140	140	140
IIA	2c	4ciii new (2007) former 4cii	none		168	156	140	140	115
IIA	2c	4civ new (2007) former 4ciii	IIA83f				140	140	140
IIA	2c	4civ new (2007) former 4ciii	none		168	156	140	140	140
IIA	2c	4d	IIA83g				140	140	140
IIA	2c	4d	none		168	156	140	140	140
IIA	2c	4e	none		204	192	173	173	173
IIA	2d	4ai	none	276	240	228	228	228	228
IIA	2d	4aii	IIA83b				365	365	365
IIA	2d	4aii	IIA83d		365	365	280	252	252
IIA	2d	4aii	none	300	264	252	227	227	204
IIA	2d	4aii new (2007)	IIA83c					227	227
IIA	2d	4aiii	IIA83a				227	227	227
IIA	2d	4aiii	IIA83d		365	365	280	280	280
IIA	2d	4aiii	none	300	264	252	227	227	227
IIA	2d	4aiii deleted (2007)	IIA83b				365		
IIA	2d	4aiii new (2007)	IIA83l					238	238
IIA	2d	4aiv	IIA83a				91	91	91
IIA	2d	4aiv	IIA83c		168	156	148	148	148
IIA	2d	4aiv	IIA83d		365	365	365	276	276
IIA	2d	4aiv	none	108	120	96	91	84	69
IIA	2d	4av	IIA83a				91	91	91
IIA	2d	4av	IIA83c		180	168	160	160	160
IIA	2d	4av	IIA83d		365	365	365	279	279
IIA	2d	4av	IIA83h			120	103	103	103
IIA	2d	4av	IIA83j				103	103	103
IIA	2d	4av	none	108	120	96	91	85	70
IIA	2d	4av new (2007)	IIA83jh					115	115
IIA	2d	4bi	none	180	168	156	143	143	143
IIA	2d	4bii	none	180	168	156	143	143	143
IIA	2d	4biii	IIA83c			156	155	155	155
IIA	2d	4biii	IIA83i				155	155	155
IIA	2d	4biii	none	180	168	156	143	143	143
IIA	2d	4biv	IIA83c			168	155	155	155
IIA	2d	4biv	IIA83e				155	155	155
IIA	2d	4biv	IIA83i				155	155	155
IIA	2d	4biv	none	180	168	156	143	143	143
IIA	2d	4ci	none	192	168	156	140	140	140
IIA	2d	4cii new (2007)	none	192	168	156	140	140	140
IIA	2d	4ciii new (2007) former 4cii	none	192	168	156	140	140	140
IIA	2d	4civ new (2007) former 4ciii	IIA83f				140	140	140
IIA	2d	4civ new (2007) former 4ciii	none	192	168	156	140	140	140
IIA	2d	4d	IIA83g				140	140	140
IIA	2d	4d	none	192	168	156	140	140	140
IIA	2d	4e	none	228	204	192	173	173	173

6.2. *Trends in nominal effort 2000-2007*

6.2.1. Trends in nominal effort by derogation and Member State

Table 6.2.1.1 lists the trends in effort by derogation given in Coun. Reg. 40/2008 (Table 1 of Annex IIA) by country in kW*days. In general there exists a high consistency of the data provided in 2008 in comparison with the historic effort data submissions to the STECF subgroups on cod recovery reviews provided in 2007.

In accordance to the ToR respective trends by derogation in GT*days (gross tonnage) are listed in Table 6.2.1.2. STECF-SGRST notes that the GT of decommissioned vessels before 2003 are not available as Member States only estimated the GT of vessels active during 2003-2007. Unlike Table 6.2.1.1; Table 6.2.1.2 therefore only lists the trend in effort for the years 2003 to 2007.

For the same period 2003 to 2007 the Table 6.2.1.3 lists the number of vessels by Member state and derogations. STECF-SGRST emphasises that the number of vessels need to be interpreted with care and cannot be added across derogations as the individual vessels may have been engaged in more than one of the defined fleets and thus be multi-fold counted. As the effort values are by quarter and some Member Countries provided stratified data by fisheries, the Table 6.2.1.3 represents the maximum number of vessels observed in any of the categories defined under the various derogations in a given year. The annual values therefore present numbers of vessels, which indicate maximum values of vessels observed in any of the individual quarters or nationally defined fisheries which are identified to contribute to the defined derogations given in the Annex IIA.

STECF-SGRST considers the quantitative results and trends of some special conditions difficult to interpret as certain Member States have failed to aggregate their fleets accordingly (see section 5.5.2). The experts expressed improved cooperation with the information provided by the national control and enforcement institutions to aggregate the fleets' catch and effort data. However, STECF-SGRST again notes that assignment of derogations is based on best expert knowledge and data availability. Specific data errors may exist regarding the huge data bases and the special knowledge required when dealing with them.

Note that in the tables of Section 6.2 the category 'none none' contains a combination of the effort information for gears which are not regulated under Annex IIA and effort information for vessels which recorded no gear type or mesh size. This category is explored in more detail in Section 6.6 where a breakdown into the constituent components is included. It is important in making use of the data in this report, that the 'none none' material is not included more than once. It would be preferable to use data in Section 6.6

Note also that the summary in Table 6.2.1.1 does not contain Spanish information relating to ICES VIa. This information was provided by Spain after the STECF review and is tabulated in Appendix 3.

Table 6.2.1.1 Trend in nominal effort (kW*days at sea) by existing derogations given in Table 1 of Annex IIA (Coun. Reg. 40/2008) and Member State, 2000-2007. Derogations are sorted by area, gear, special condition (SPECON), and country. Data qualities are summarised in Section 5.5.2 and Table 5.5.2.1.

ANNEX	REG AREA	REG GEAR	SPECON	COUNTRY	2000	2001	2002	2003	2004	2005	2006	2007
IIa	2a	4ai	none	DEN	250303	379963	564151	540187	347357	315261	258982	169095
IIa	2a	4ai	none	GER	1989							
IIa	2a	4ai	none	SWE	34860	58078	29714	33717	34056	53585	69015	44959
IIa	2a	4aii	IIA81b	SWE					9912	113990	165426	233076
IIa	2a	4aii	IIA81d	DEN			73062	63027	2532	366	271	128
IIa	2a	4aii	none	DEN	1914299	1819125	1650195	1554406	179125	51707	4424	1059
IIa	2a	4aii	none	GER	32520	1288	19419	35690	3288			13354
IIa	2a	4aii	none	SWE	535167	337257	100391	73294	26046			
IIa	2a	4aiii	IIA81a	DEN							471600	418246
IIa	2a	4aiii	IIA81a	SWE						546830	552263	524884
IIa	2a	4aiii	IIA81d	DEN			22056	54029	29423	17703	9745	13259
IIa	2a	4aiii	IIA81l	DEN							109233	
IIa	2a	4aiii	none	DEN	1938069	2151896	1777714	2103384	2983961	2606136	1839774	1748383
IIa	2a	4aiii	none	GER	2431	10387	16354	18444	36096	7884	19176	31421
IIa	2a	4aiii	none	SWE	1067772	1237725	1172922	1296340	1007665	385439	510609	517080
IIa	2a	4aiv	IIA81a	DEN							61953	55879
IIa	2a	4aiv	IIA81a	SWE								3325
IIa	2a	4aiv	IIA81c	DEN			141996	44018	80856	98962	6651	5447
IIa	2a	4aiv	IIA81d	DEN			3443	276	5370			
IIa	2a	4aiv	none	DEN	716324	771538	350674	80003	80526	78790	108074	100304
IIa	2a	4aiv	none	GER	9757	8320		894	478	2475	5262	2180
IIa	2a	4aiv	none	SWE	218719	169823	72991	32512	15121	11546	5160	4282
IIa	2a	4av	IIA81a	DEN							1817	
IIa	2a	4av	IIA81a	SWE								6966
IIa	2a	4av	IIA81c	DEN			13610	12321		93		
IIa	2a	4av	IIA81d	DEN			7324	647		324		
IIa	2a	4av	IIA81j	DEN							11967	2104
IIa	2a	4av	none	DEN	70846	44037	64793	93620	27328	15797	50324	20134
IIa	2a	4av	none	GER	1760		1305		1434	478	1434	1434
IIa	2a	4av	none	SWE	10273		14460	11858		13324		5225
IIa	2a	4biii	none	DEN	121							
IIa	2a	4ci	none	DEN	114507	70691	98136	23694	24870	72896	61485	29662
IIa	2a	4ci	none	GER			11861	12508	13553	27837	38093	38927
IIa	2a	4ci	none	SWE	6827	5290	3202	2084	1237	3308	4592	5793
IIa	2a	4cii	none	DEN	89173	131485	116181	211506	63365	57523	62234	50587
IIa	2a	4cii	none	GER	1932	800		1288	368	636	1350	1800
IIa	2a	4cii	none	SWE	35051	26373	31378	30125	13792	12859	23142	36061
IIa	2a	4ciii	none	DEN	32467	51997	67471	31095	5552	4292	6088	8961
IIa	2a	4ciii	none	GER							525	
IIa	2a	4ciii	none	SWE	11313	5662		2044	4441	3689	2920	2384
IIa	2a	4civ	IIA81f	DEN			12157	4111	2663	386		
IIa	2a	4civ	none	DEN	12910	31537	26938	60159	22000	4073	4397	8447
IIa	2a	4civ	none	SWE	576	576	2150	9110	9396	2586	3270	4884
IIa	2a	4d	none	DEN	243			1172	380	5181	2205	1256
IIa	2a	4e	none	DEN	118	3791						
IIa	2a	4e	none	SWE	749	2079	3651	5682	1376	10684	27478	37856
IIa	2a	none	none	DEN	276471	256106	291961	374630	312973	399753	350033	268802
IIa	2a	none	none	GER							2877	
IIa	2a	none	none	SWE	288803	607495	531239	606670	573943	544320	542008	494539
IIa	2b	4ai	none	DEN	3562103	2498562	2289008	2100009	1708310	988434	685775	490934
IIa	2b	4ai	none	ENG	4918	7406	88	51696	1660		201	
IIa	2b	4ai	none	FRA	29960	43521	81257	64449	99046	129642	92434	114255
IIa	2b	4ai	none	GER	1967	4940	570	808			10502	884
IIa	2b	4ai	none	IRL								-1
IIa	2b	4ai	none	NED	***	***	4374	6466	7241	10992	29425	27953
IIa	2b	4ai	none	NIR					7680			
IIa	2b	4ai	none	SCO	92011	6521		6375	5460	2356	116	72821
IIa	2b	4ai	none	SWE	121644	316123	200433	207504	275488	338637	238150	214528
IIa	2b	4aii	IIA81b	SWE					308459	542008	664972	894575
IIa	2b	4aii	IIA81d	DEN			286013	138894	23214	1499	268	
IIa	2b	4aii	IIA81d	ENG	331675	313095	317200	387482	446492	463321	371660	376196
IIa	2b	4aii	IIA81d	FRA	2565958	5438154	4926100	7788615	8589718	8642627	9139147	6876991
IIa	2b	4aii	IIA81d	GBJ	25039	25038	17334	19260	7383	12519	1926	7383
IIa	2b	4aii	IIA81d	NIR			3632			14991	68494	44645
IIa	2b	4aii	IIA81d	SCO	2777498	3228538	4104580	4309552	4005036	3482452	2940513	2661754
IIa	2b	4aiv	IIA81c	DEN			1383057	327383	551368	552339	27829	38743
IIa	2b	4aiv	IIA81c	ENG	545789	557964	557536	371239	246316	101516	510548	398456
IIa	2b	4aiv	IIA81c	FRA	1074		179		797		3418	
IIa	2b	4aiv	IIA81c	GER	258064	232481	187341	50877	15195	19860	112313	51447
IIa	2b	4aiv	IIA81c	NIR					1926	428	6226	
IIa	2b	4aiv	IIA81c	SCO	208075	155563	122684	214722	237665	179725	106816	118238
IIa	2b	4aiv	IIA81d	DEN			45507	861	1692		3398	

Table 6.2.1.1 continued

ANNEX	REG AREA	REG GEAR	SPECON	COUNTRY	2000	2001	2002	2003	2004	2005	2006	2007
IIa	2b	4aiv	IIA81d	ENG	904678	780282	507270	114694	14093	22572	12975	13862
IIa	2b	4aiv	IIA81d	FRA	4956449	3708349	3959099	4099831	3083302	2815749	2874501	2920376
IIa	2b	4aiv	IIA81d	GBJ	15087		6902					
IIa	2b	4aiv	IIA81d	GER	824555	678614	352192	188403	168900	220380	148995	264990
IIa	2b	4aiv	IIA81d	NIR						5535	6273	
IIa	2b	4aiv	IIA81d	SCO	2549660	2020619	1523298	94842	101936	154269	128055	201693
IIa	2b	4aiv	IIA81k	FRA	34575	17845	13973	6894			515	
IIa	2b	4aiv	none	DEN	12135955	13193994	3134880	539397	481476	836917	1166075	696229
IIa	2b	4aiv	none	ENG	3396449	2833499	1145109	215085	100275	58363	92005	324444
IIa	2b	4aiv	none	FRA	633481	427993	598362	218996	318142	495154	472876	504744
IIa	2b	4aiv	none	GER	1100358	973659	360912	73546	102007	75125	380820	234495
IIa	2b	4aiv	none	IRL				1847			1044	-1
IIa	2b	4aiv	none	NED	***	***	432144	347806	228876	424922	496479	527818
IIa	2b	4aiv	none	NIR		5500	4235		1540	8105	6816	18274
IIa	2b	4aiv	none	SCO	30762510	28265993	13069666	827075	281493	329280	521860	797767
IIa	2b	4aiv	none	SWE	1495570	1449446	296650	61862	15923	25419	6478	9099
IIa	2b	4av	IIA81c	DEN			308217	185321	113324	176646	11959	16799
IIa	2b	4av	IIA81c	ENG	6208	402	15670	61296	49764	27131	11664	17767
IIa	2b	4av	IIA81c	FRA							2310	
IIa	2b	4av	IIA81c	GER			5967					
IIa	2b	4av	IIA81c	NIR					13482	38092	27338	42532
IIa	2b	4av	IIA81c	SCO			8656	953				
IIa	2b	4av	IIA81d	DEN			356182	93224	63042	47189	50532	28729
IIa	2b	4av	IIA81d	ENG	39564	23187	129922	268369	249268	337307	288589	114164
IIa	2b	4av	IIA81d	FRA	42960	9656	49255	163571	17471	31579	72474	10881
IIa	2b	4av	IIA81d	GBJ			4815					
IIa	2b	4av	IIA81d	GER		10905	607442	630264	638955	618323	623838	658357
IIa	2b	4av	IIA81d	SCO			72638	274811	373265	383877	341818	194189
IIa	2b	4av	IIA81h	DEN							312979	471423
IIa	2b	4av	none	DEN	974776	769226	8445356	8601884	7225734	7852471	5604656	4458851
IIa	2b	4av	none	ENG	29017	14322	1085884	1198237	806173	693915	909788	629524
IIa	2b	4av	none	FRA	6667	2917	323624	9120	766	8830	17750	25084
IIa	2b	4av	none	GER	1068959	721668	1402025	1730142	1605190	2206611	1760218	1760442
IIa	2b	4av	none	NED	***	***	675636	203852	231501	153528	88632	100113
IIa	2b	4av	none	NIR						18650	5595	172
IIa	2b	4av	none	SCO	164429	101650	9429731	14724559	11680027	11122052	10566130	9709528
IIa	2b	4av	none	SWE	2702	61502	1001107	491470	454880	471335	261688	278657
IIa	2b	4ci	none	DEN	700786	720771	451568	363760	444802	503698	393930	244005
IIa	2b	4ci	none	ENG	28352	53250	17143	15826	13699	10925	8678	11202
IIa	2b	4ci	none	FRA	126250	31445	109469	120589	99707	57404	29138	28615
IIa	2b	4ci	none	GER	24840	21160	59237	43769	47249	139865	98759	92572
IIa	2b	4ci	none	NED	***	***	66096	52282	24944	32955	128764	92656
IIa	2b	4ci	none	SCO	80							
IIa	2b	4ci	none	SWE	19501	14082	23223	27062	34838	27036	20860	17790
IIa	2b	4cii	none	DEN	1057518	1198767	1094053	1134715	818142	807789	827207	553830
IIa	2b	4cii	none	ENG	75353	81320	58033	22950	8813	17248	14078	16323
IIa	2b	4cii	none	FRA	81684	135894	160270	131314	45335	108557	102640	106371
IIa	2b	4cii	none	GER	9384	4416	700	18822	6607	13618	15835	14973
IIa	2b	4cii	none	NED	***	***			1644	15264	18142	14821
IIa	2b	4cii	none	SCO	720	5200	8533	5680	240		373	
IIa	2b	4cii	none	SWE	49396	63026	57215	58899	70700	68726	78678	59968
IIa	2b	4ciii	none	DEN	1939878	1794596	1838061	1196718	846278	782728	698980	319854
IIa	2b	4ciii	none	ENG	223806	200566	96673	87344	87915	49852	48881	21665
IIa	2b	4ciii	none	FRA	39312	85391	69752	39437	19816	26617	18694	2421
IIa	2b	4ciii	none	GER	29547		7911	39785	58490	50378	30841	24574
IIa	2b	4ciii	none	NED	***	***				442		220
IIa	2b	4ciii	none	SCO	9768	35277	28499	3882	9279	6080	1120	
IIa	2b	4ciii	none	SWE	5008	3219	7010	8066	14357	19523	29865	35809
IIa	2b	4civ	none	DEN	188329	169847	80921	54146	66282	34491	25431	38418
IIa	2b	4civ	none	ENG	359975	295213	269191	178773	249817	228134	236293	81084
IIa	2b	4civ	none	FRA			444	1248	2049	801	238	2576
IIa	2b	4civ	none	GER	145445	96871	62181	88775	50715	73123	97838	37570
IIa	2b	4civ	none	SCO	15272	15361	8602	17572				
IIa	2b	4civ	none	SWE	3897	2978	7206	11387	10468	2286	3776	7360
IIa	2b	4d	none	DEN			371	1027	8020	14512	4552	4172
IIa	2b	4d	none	ENG	54988	57616	38426	968	1564	3245	8721	2727
IIa	2b	4d	none	FRA	753401	467375	130293	124147	142298	243118	217605	169900
IIa	2b	4d	none	GER							1547	126
IIa	2b	4e	none	DEN	92857	85410		4472	3905	7750		
IIa	2b	4e	none	ENG	340946	144488	257369	96297	89501	130990	60652	23076
IIa	2b	4e	none	FRA	29136	47020	168582	102853	89284	68488	56572	83616

Table 6.2.1.1 continued

ANNEX	REG AREA	REG GEAR	SPECON	COUNTRY	2000	2001	2002	2003	2004	2005	2006	2007
IIa	2b	4e	none	NIR			8856					
IIa	2b	4e	none	SCO	77144	88171	104086	57070	4351		7567	1491
IIa	2b	4e	none	SWE	11727	32714	44738	32305	44221	42905	123481	165019
IIa	2b	none	IIA81c	ENG	1115			3222		2936		4434
IIa	2b	none	IIA81d	ENG								201
IIa	2b	none	IIA81d	GER	1680							5600
IIa	2b	none	none	BEL	1036998	997120	760936	775155	687191	585232	590976	642154
IIa	2b	none	none	DEN	18802086	19800851	18720417	18315421	18454094	13186674	12146319	8002511
IIa	2b	none	none	ENG	2871776	3419260	3667334	4005377	3807203	4005239	3325688	3811383
IIa	2b	none	none	FRA	3146020	3999186	4297927	5710742	5627110	4388027	3838778	2669410
IIa	2b	none	none	GBG	39169	36480	27680	37920	38420	33150	63753	16072
IIa	2b	none	none	GBJ	108399	113180	49931	67827	82489	76601	67275	39267
IIa	2b	none	none	GER	8642120	8425119	8475851	9502062	8962256	8686085	8378639	8320270
IIa	2b	none	none	IOM						5393	25624	
IIa	2b	none	none	IRL	253731	325706	465280	681499	777305	494616	370585	605203
IIa	2b	none	none	NED			47869689	48297655	57157780	52318052	40502838	39044051
IIa	2b	none	none	NIR	116502	227447	205919	297892	263909	171226	195703	183525
IIa	2b	none	none	SCO	7175965	5725468	6449799	7429094	8410029	5758058	4906933	5120123
IIa	2b	none	none	SWE	3836888	4085356	4340044	4127441	4099613	3432680	3226107	2582222
IIa	2b1	4aii	none	DEN	2140959	1532423	1324457	870244	170496	57234	11182	2900
IIa	2b1	4aii	none	GER	12045			2883				
IIa	2b1	4aii	none	SWE	1278657	1108348	1149654	785082	242255			
IIa	2b1	4aiii	IIA81a	DEN							1130018	643654
IIa	2b1	4aiii	IIA81a	SWE						666398	540657	555983
IIa	2b1	4aiii	IIA81d	DEN			40162	77282	52071	106998	70708	50276
IIa	2b1	4aiii	IIA81d	SWE							64080	
IIa	2b1	4aiii	IIA81l	DEN							128159	
IIa	2b1	4aiii	none	DEN	3849957	3782834	4515173	4956169	6607543	4886812	2846375	2227907
IIa	2b1	4aiii	none	GER				24456	16423			
IIa	2b1	4aiii	none	NED	***	***		3156				
IIa	2b1	4aiii	none	SWE	1213577	1347564	1321408	1333813	1402450	762442	845732	602246
IIa	2b1	4aiv	IIA81a	DEN							138793	115245
IIa	2b1	4aiv	IIA81a	SWE								857
IIa	2b1	4av	IIA81a	DEN							13066	4983
IIa	2b1	4av	IIA81a	GER							31642	
IIa	2b1	4av	IIA81a	SWE								5145
IIa	2b1	4av	IIA81j	DEN							61319	79742
IIa	2b1	none	none	DEN				460	539			1395
IIa	2b1	none	none	GER					6165	26468	16160	13220
IIa	2b1	none	none	NED					22450			
IIa	2b1	none	none	SWE	518816	438556	941569	743725	452926	515178	318483	291519
IIa	2b12	4bi	none	BEL	3443550	3442334	3058178	3239410	2841519	2781030	2202057	1658254
IIa	2b12	4bi	none	DEN		16173	1103	7887		880	1979	
IIa	2b12	4bi	none	ENG	432890	563264	159383					
IIa	2b12	4bi	none	FRA	101699	59734	132247	54335	44429	49222	36807	71387
IIa	2b12	4bi	none	GER	2200988	1743343	1839197	1717270	2040128	2243791	1893862	1594317
IIa	2b12	4bi	none	NED	***	***	40384856	35896366	37118164	38412211	32744143	34217756
IIa	2b12	4bi	none	SCO	1022366	1284709	1228025	991069	972795	512485	203222	1165
IIa	2b12	4bii	none	DEN	9231		33392	15330	14859	880	3799	
IIa	2b12	4bii	none	ENG	7002	57970						
IIa	2b12	4bii	none	FRA	7644	20247	21997	17777	6593	2548	182	
IIa	2b12	4bii	none	GER			1972	10032	29811	3392	23791	5523
IIa	2b12	4bii	none	NED	***	***	50545	172620	164035	49233	57198	92341
IIa	2b12	4biii	IIA81c	ENG	2834028	2160079	1167476	1067390	1676456	1440677	940815	979714
IIa	2b12	4biii	IIA81c	FRA	4262	364				1295		
IIa	2b12	4biii	IIA81c	GER	231091	257522	86530	13436	14325		5945	
IIa	2b12	4biii	IIA81c	NIR	331425	477954			5892			
IIa	2b12	4biii	IIA81c	SCO	2847575	2757454	1980145	1722083	1546067	1339704	1083757	412619
IIa	2b12	4biii	IIA81i	ENG	1046788	847044	199823	109831	72852	341616	256877	214230
IIa	2b12	4biii	IIA81i	NIR		249750						
IIa	2b12	4biii	none	BEL	109278	131757	90656	30605	9186	10573	690	10099
IIa	2b12	4biii	none	DEN	2023555	1979159	576188	117222	91476	131285	84710	176686
IIa	2b12	4biii	none	ENG	1659868	1409104	22482					
IIa	2b12	4biii	none	FRA			6310					
IIa	2b12	4biii	none	GER	107527	168784	9061	2485	17667	2431	19280	1354
IIa	2b12	4biii	none	NED	***	***	978937	1986797	1070435	1066106	808719	169690
IIa	2b12	4biii	none	NIR	177480							
IIa	2b12	4biii	none	SCO	452308	689204	263544	43292	490330	515851	465010	246160
IIa	2b12	4biv	IIA81c	DEN			1132614	1343420	1228890	1421436		2582
IIa	2b12	4biv	IIA81c	ENG	237583	405586	1135184	884437	542712	456600	926085	232396
IIa	2b12	4biv	IIA81c	GER			27153	9945		884	17680	
IIa	2b12	4biv	IIA81c	NIR			555201	764514	530355	36825		
IIa	2b12	4biv	IIA81c	SCO			514473	191060	183647	196405	126554	75543

Table 6.2.1.1 continued

ANNEX	REG AREA	REG GEAR	SPECON	COUNTRY	2000	2001	2002	2003	2004	2005	2006	2007
IIa	2b12	4biv	IIA81e	DEN							266012	
IIa	2b12	4biv	IIA81e	GER			34189	1760			6188	
IIa	2b12	4biv	IIA81i	ENG		16412	791355	171000	127076	161559	395155	73442
IIa	2b12	4biv	IIA81i	NIR			195175	200725	12950			
IIa	2b12	4biv	none	BEL	1645583	1308188	1312043	656291	878958	795603	796619	730055
IIa	2b12	4biv	none	DEN	101205	71929	53587	215265	260271	52320	720838	931187
IIa	2b12	4biv	none	ENG	8058	102068	275983	5372	1343			
IIa	2b12	4biv	none	FRA			728					
IIa	2b12	4biv	none	GER	1502	8168	54051	36657	32691	1465	30559	31610
IIa	2b12	4biv	none	NED	***	***	462179	759292	1228530	1222580	1644934	917919
IIa	2b12	4biv	none	SCO			457447	675878	511069	534405	476538	273770
IIa	2b12	4d	IIA81g	ENG	376	376	470			1222	1598	611
IIa	2b12	4d	IIA81g	FRA	295344	355406	639139	378817	365066	415191	784394	761615
IIa	2b2	4aii	IIA81c	DEN			1287080	1216513	958279	734753		
IIa	2b2	4aii	IIA81c	ENG	287014	288372	273506	370966	227325	256542	259232	131602
IIa	2b2	4aii	IIA81c	GBJ	106							
IIa	2b2	4aii	IIA81c	GER	64542	100149	129922	130082	92199	121990	90884	155893
IIa	2b2	4aii	IIA81c	NIR			4096	6784	3200	3968	6168	7486
IIa	2b2	4aii	IIA81c	SCO	33677	22711	17020	37538	50960	37310		
IIa	2b2	4aii	none	DEN	929663	1054377	890903	1324543	1355350	1180252	1287300	604448
IIa	2b2	4aii	none	ENG	420356	411050	412665	641242	469689	476779	458720	308173
IIa	2b2	4aii	none	FRA	766319	1063089	1440441	941338	567878	661073	607578	698640
IIa	2b2	4aii	none	GER	187190	142625	125664	349022	387025	270202	469754	456903
IIa	2b2	4aii	none	IRL					884			75202
IIa	2b2	4aii	none	NED	***	***	533159	1092704	1129488	1172389	1316873	1267964
IIa	2b2	4aii	none	NIR		7480	15565		660	51420	242246	103225
IIa	2b2	4aii	none	SCO	2045119	2070990	4438929	4979045	4369666	4838779	4474364	4282071
IIa	2b2	4aii	none	SWE			180					
IIa	2b2	4civ	IIA81f	DEN			81918	59611	52335	25155	29147	32655
IIa	2b2	none	IIA81c	GER		3920	2800					
IIa	2b2	none	none	DEN			128		121		125	
IIa	2b2	none	none	ENG	437891	850184	1160742	1139504	1075098	1184279	962026	1071386
IIa	2b2	none	none	FRA	454331	468141	372889	362665	411252	567740	623195	355152
IIa	2b2	none	none	GBI							1115	
IIa	2b2	none	none	GER	904498	1097945	1155611	1528003	1374810	1276679	1123927	490862
IIa	2b2	none	none	IOM							1115	
IIa	2b2	none	none	IRL				470269	532227	391299	185818	374129
IIa	2b2	none	none	NED			6045975	5588739	6377933	6020951	4973436	4824179
IIa	2b2	none	none	NIR	57172	6651	81873	116060	75583	41087	36328	53402
IIa	2b2	none	none	SCO	3533808	2910912	3832177	4484369	4151725	2599448	2011600	2000785
IIa	2b2	none	none	SWE	77984	98496	124025	131915	132204	167035	124395	154017
IIa	2b23	4aiii	IIA81a	DEN								41262
IIa	2b23	4aiii	IIA81a	GER							4862	
IIa	2b23	4aiii	IIA81a	SWE							490	
IIa	2b23	4aiii	IIA81d	DEN			13834	30728	8135			
IIa	2b23	4aiii	IIA81d	ENG	23474	17692	17662	15208	92746	132176	164750	148231
IIa	2b23	4aiii	IIA81d	FRA	224746	422398	541405	613641	761554	390345	127403	103864
IIa	2b23	4aiii	IIA81d	GBJ		16050	2086	8667	12840	13161	13482	12198
IIa	2b23	4aiii	IIA81d	NIR						21160	70447	165009
IIa	2b23	4aiii	IIA81d	SCO	666	2442	7688	3330	1332	444	1942	
IIa	2b23	4aiii	IIA81l	DEN							204687	
IIa	2b23	4aiii	none	DEN	295265	417316	525095	1184934	1268740	732120	416000	847866
IIa	2b23	4aiii	none	ENG	6714	7121	1145	241253	176891	179936	231846	231818
IIa	2b23	4aiii	none	FRA	396943	376708	579304	329864	308350	142541	100895	124867
IIa	2b23	4aiii	none	GER		24973	51272	544706	424591	319296	203129	74730
IIa	2b23	4aiii	none	IRL				54				
IIa	2b23	4aiii	none	NED	***	***	18288	223385	119409	26041	71070	110015
IIa	2b23	4aiii	none	NIR					8580	130137	147942	317276
IIa	2b23	4aiii	none	SCO	13867	18653	2866	741463	1097688	749088	1146477	1736268
IIa	2b23	4aiii	none	SWE		1679	2892	4265	2055	1192	808	2515
IIa	2b23	4aiv	IIA81a	DEN							11716	1871
IIa	2b23	4aiv	IIA81a	GER							8840	
IIa	2b23	4av	IIA81a	DEN							387772	126006
IIa	2b23	4av	IIA81a	GER							168918	
IIa	2b23	4av	IIA81a	SWE							24354	64083
IIa	2b23	4av	IIA81j	DEN							1354302	677660
IIa	2b23	none	none	DEN	189		559	258	2853		250	22
IIa	2b23	none	none	FRA	66124	110870	182753	212818	730583	2428888	3347656	3159782
IIa	2b23	none	none	SCO								1456
IIa	2b3	4aii	IIA81c	ENG	65021	38433	34198	30199	42735	35214	24084	15282
IIa	2b3	4aii	IIA81c	GBJ	6985	1524	318					
IIa	2b3	4aii	none	ENG	59527	26717	16656	34580	8114	44	3634	3843
IIa	2b3	4aii	none	FRA	3523543	3864044	5883796	4464795	4354517	5114257	4962047	5176292
IIa	2b3	4aii	none	GBG		3978						
IIa	2b3	4aii	none	NED	***	***	5916	22904	48477	105547	259692	320919

Table 6.2.1.1 continued

ANNEX	REG AREA	REG GEAR	SPECON	COUNTRY	2000	2001	2002	2003	2004	2005	2006	2007
IIa	2b3	4aii	none	SCO		825		11553			115117	204496
IIa	2b3	4bi	none	BEL	1318773	1516593	1847425	1953931	1534549	1357218	1926810	2178441
IIa	2b3	4bi	none	ENG	66773	96292	81391					21481
IIa	2b3	4bi	none	FRA	430204	594232	676110	637688	694987	721017	831204	756975
IIa	2b3	4bi	none	NED	***	***	1471		2204		0	368
IIa	2b3	4bii	none	ENG	1395							
IIa	2b3	4bii	none	FRA	18588	105417	132198	45278	18207	38356	43665	16711
IIa	2b3	4biii	IIA81c	ENG	3810	9947	3323	1564		1484		1870
IIa	2b3	4biii	IIA81c	FRA	16169	9737						
IIa	2b3	4biii	IIA81i	ENG		6057	2314	3477				
IIa	2b3	4biii	none	ENG	1088							
IIa	2b3	4biii	none	FRA	1155	6929						
IIa	2b3	4biv	IIA81c	ENG	688							
IIa	2b3	4civ	IIA81f	FRA					6789			770
IIa	2b3	4d	IIA81g	ENG	2538	2303	6862	7332	6486	6110	4136	4841
IIa	2b3	4d	IIA81g	FRA	31540	682803	1516338	1496916	1602765	1729434	1607043	1773016
IIa	2b3	none	none	FRA	459136	829865	841507	727350	948975	374602	150946	145501
IIa	2b3	none	none	NED	***	***			2205			
IIa	2c	4ai	none	ENG				134				
IIa	2c	4ai	none	IRL				2643	1562	18418	10520	
IIa	2c	4ai	none	NIR					2560		2204	
IIa	2c	4aii	IIA81c	ENG	97548	81999	85930	57164	52758	60013	66834	77932
IIa	2c	4aii	IIA81c	GBI	7964	4397	8688	10434	9051	16456	2715	866
IIa	2c	4aii	IIA81c	GBJ	530							
IIa	2c	4aii	IIA81c	IOM	7964	4397	8688	10434	9051	16456	2715	
IIa	2c	4aii	IIA81c	NIR	702641	752535	627308	779206	519733	523554	427669	340920
IIa	2c	4aii	IIA81d	ENG	116172	83223	68011	55104	68483	55299	76444	69117
IIa	2c	4aii	IIA81d	FRA	4689					588		
IIa	2c	4aii	IIA81d	NIR	1060555	1297492	1256489	1486187	1550041	1537372	1445494	1635335
IIa	2c	4aii	IIA81d	SCO	60274	27507	17756	38021	31019	15407	7301	11038
IIa	2c	4aii	none	ENG	247959	156734	82763	85870	152396	130809	77003	84254
IIa	2c	4aii	none	FRA	43768	8681	1767	588		2352		324
IIa	2c	4aii	none	GBI	4	2153		67	435	2039	603	9497
IIa	2c	4aii	none	IOM	4	2153		67	435	2039	603	
IIa	2c	4aii	none	IRL				1206196	1363394	1458446	1454518	1540079
IIa	2c	4aii	none	NIR	2091492	1842546	1065358	1129939	1067888	1155502	1102736	1166472
IIa	2c	4aii	none	SCO	3834	6832		4106	62165	19015	134	268
IIa	2c	4aiii	IIA81d	ENG	9843	333	8360	6497	6294	11450	8077	1672
IIa	2c	4aiii	IIA81d	FRA		672						
IIa	2c	4aiii	IIA81d	NIR				558	179	179	4205	766
IIa	2c	4aiii	none	ENG	20300	4613	1032	282	56515	27783	19167	11607
IIa	2c	4aiii	none	FRA	316							
IIa	2c	4aiii	none	GBI		1196	13		1340	623	459	1301
IIa	2c	4aiii	none	IOM		1196	13		1340	623	459	
IIa	2c	4aiii	none	IRL				10567	2081	13298	3989	13576
IIa	2c	4aiii	none	NIR	3033	4650			344	946	3508	10120
IIa	2c	4aiii	none	SCO				2187	586			5502
IIa	2c	4aiv	IIA81c	ENG	4544	31412	24877	30114	2012	3062	1726	1160
IIa	2c	4aiv	IIA81c	FRA			11337	5454	11950			
IIa	2c	4aiv	IIA81c	GBI		511		1448	362	172		
IIa	2c	4aiv	IIA81c	IOM		511		1448	362	172		
IIa	2c	4aiv	IIA81c	NIR	68967	97426	198442	246783	140165	52257	48407	26888
IIa	2c	4aiv	IIA81d	ENG	79769	95722	80933	103095	85048	24446	4662	833
IIa	2c	4aiv	IIA81d	FRA	34418	25468	162527	49165	77326	62571	43118	16070
IIa	2c	4aiv	IIA81d	NIR	383369	535157	586322	608941	485911	361528	351396	209229
IIa	2c	4aiv	IIA81d	SCO	19579	30597	28557	26110	26011	3889	1762	
IIa	2c	4aiv	IIA81k	ENG			1780	801				
IIa	2c	4aiv	IIA81k	FRA	10602	12968	37081	18338	53303			
IIa	2c	4aiv	none	ENG	163507	233258	185210	167828	104860	62735	61890	14535
IIa	2c	4aiv	none	FRA	108769	496480	471305	393683	163742	213195	114601	60039
IIa	2c	4aiv	none	GBI	16057			4494				648
IIa	2c	4aiv	none	IOM	16057			4494				
IIa	2c	4aiv	none	IRL				347258	133774	84376	87629	139648
IIa	2c	4aiv	none	NIR	890558	980684	1061636	1194903	535958	457228	376689	100550
IIa	2c	4aiv	none	SCO	91594	88560	55875	62612	4096		1342	
IIa	2c	4av	IIA81c	ENG	82	1154	902	2026	264	820	690	
IIa	2c	4av	IIA81c	NIR							5564	1712
IIa	2c	4av	IIA81d	ENG	6262	1887	5878	15337	2010			333
IIa	2c	4av	IIA81d	NIR				3150				
IIa	2c	4av	IIA81d	SCO					1148			
IIa	2c	4av	none	ENG	149	243		80733	3186	3186		

Table 6.2.1.1 continued

ANNEX	REG AREA	REG GEAR	SPECON	COUNTRY	2000	2001	2002	2003	2004	2005	2006	2007
IIa	2c	4av	none	FRA			588					
IIa	2c	4av	none	IRL				8426	1252		4114	1218
IIa	2c	4av	none	NIR				1540		1484	3672	
IIa	2c	4av	none	SCO				3787	839			
IIa	2c	4bi	none	BEL	982797	1484090	1759701	1541709	1140260	1318020	878427	681099
IIa	2c	4bi	none	ENG	31646	32672	5312					
IIa	2c	4bi	none	IRL				373784	352389	480525	489172	517134
IIa	2c	4bii	none	IRL				25244	5710	12573		11695
IIa	2c	4bii	none	SCO								1074
IIa	2c	4biii	none	ENG	288							
IIa	2c	4biii	none	IRL				409658	17011	12670		
IIa	2c	4ci	none	ENG	470						3325	1236
IIa	2c	4ci	none	IRL				1961		25167	70	151
IIa	2c	4ci	none	SCO						895		
IIa	2c	4cii	none	ENG	18486	10971	6927	11464	6458	2348	2348	1076
IIa	2c	4cii	none	FRA						838		
IIa	2c	4cii	none	IRL				31257	28725	1306	8264	5238
IIa	2c	4ciii	none	ENG	3433		2148	840				
IIa	2c	4ciii	none	IRL				13349	8729	762	22186	32848
IIa	2c	4ciii	none	NIR	1332	2442	4329		222			
IIa	2c	4civ	none	ENG		350	1522	191	1112	940		
IIa	2c	4civ	none	IRL					320	2299		
IIa	2c	4d	none	ENG	523						475	
IIa	2c	4e	none	ENG	176599	171163	85860	44139	52783	81118	22301	3667
IIa	2c	4e	none	FRA			300					
IIa	2c	4e	none	IRL		955			800			185
IIa	2c	4e	none	SCO		13284		3247				
IIa	2c	none	IIA81c	GBI	181	543	6335	4163	4344	2534	362	
IIa	2c	none	IIA81c	IOM	181	543	6335	4163	4344	2534	362	
IIa	2c	none	IIA81c	ENG	113					3345		
IIa	2c	none	IIA81d	NIR							110	
IIa	2c	none	none	BEL		4416		518	8104	23727	18534	59600
IIa	2c	none	none	ENG	293161	375491	560293	630816	519980	563580	597258	514001
IIa	2c	none	none	FRA				1936				12684
IIa	2c	none	none	GBI	8354	5560	186	2911	1395	862	7959	9189
IIa	2c	none	none	GBJ	65272	33456	64644	71212	76375	17721	11993	35952
IIa	2c	none	none	IOM	8354	5560	186	2911	1395	862	7959	
IIa	2c	none	none	IRL	4087454	3563383	3781865	547505	1066441	467632	414409	440271
IIa	2c	none	none	NED			113539	6600	42528	21716	15299	18386
IIa	2c	none	none	NIR	224273	227973	181761	253494	206408	195535	198806	208027
IIa	2c	none	none	SCO	703296	1003856	803874	901332	725110	809115	603815	938599
IIa	2d	4ai	none	IRL				12588	41781	10460	32513	21008
IIa	2d	4ai	none	NIR	4125		1688	938				
IIa	2d	4ai	none	SCO	194176	50818	57455	79107	36607	52925		256
IIa	2d	4aii	IIA81c	ENG	1629		8180	13120	4560			
IIa	2d	4aii	IIA81c	GBI				181		181		
IIa	2d	4aii	IIA81c	IOM				181	0	181	0	
IIa	2d	4aii	IIA81c	NIR	117400	142684	160508	110379	57400	29495	36123	46075
IIa	2d	4aii	IIA81c	SCO	4522	4484	211					
IIa	2d	4aii	IIA81d	ENG	14208	206	21228	25649	8273	11292	15493	24559
IIa	2d	4aii	IIA81d	FRA	1470	10803	11113	27276	23522			883
IIa	2d	4aii	IIA81d	NIR	136814	184057	200963	165046	209778	220256	247213	314537
IIa	2d	4aii	IIA81d	SCO	4113383	4184016	4357852	4617197	3882483	3393590	3114611	2908694
IIa	2d	4aii	none	ENG	13569	11874		48480	28988	27811	18816	20736
IIa	2d	4aii	none	FRA	14720	7110		9447				
IIa	2d	4aii	none	GBI					5			
IIa	2d	4aii	none	IOM					5			
IIa	2d	4aii	none	IRL				867140	900658	733167	681935	405093
IIa	2d	4aii	none	NIR	90662	35145	25570	14189	80513	91169	131152	301482
IIa	2d	4aii	none	SCO	843379	631615	365937	420796	470324	569258	605167	780781
IIa	2d	4aiii	IIA81d	ENG		1007			5425	10450	11550	12031
IIa	2d	4aiii	IIA81d	NIR	447				1969		2217	16253
IIa	2d	4aiii	IIA81d	SCO		2268	4056	8832	6762	11316	34638	1518
IIa	2d	4aiii	none	ENG	3531		6480	19630	8344	7832	17790	955
IIa	2d	4aiii	none	IRL				194923	84771	43295	39895	24368
IIa	2d	4aiii	none	NIR		2000	272		2864	2733	23264	59204
IIa	2d	4aiii	none	SCO	1872	5826	436	681764	962580	608656	625927	1011007
IIa	2d	4aiv	IIA81c	ENG				164				
IIa	2d	4aiv	IIA81c	NIR	17634	18255	18905	30323	4786	1790		1926
IIa	2d	4aiv	IIA81c	SCO	50409	53968	109532	43865	37263	12311	22890	23749
IIa	2d	4aiv	IIA81d	ENG	194110	209807	67532	195855	34837	2835		

Table 6.2.1.1 continued

ANNEX	REG AREA	REG GEAR	SPECON	COUNTRY	2000	2001	2002	2003	2004	2005	2006	2007
IIa	2d	4aiv	IIA81d	FRA	8562383	7065916	6137003	4427688	3545092	4436207	3428935	3253081
IIa	2d	4aiv	IIA81d	GER		7335	21840			2160	7245	2880
IIa	2d	4aiv	IIA81d	NIR	232822	212714	152911	144082	66249	33754	14680	4173
IIa	2d	4aiv	IIA81d	SCO	1744754	2436269	2224640	676458	744777	374962	293884	277189
IIa	2d	4aiv	none	ENG	475758	408537	230735	80532	56619	27534	17512	3037
IIa	2d	4aiv	none	FRA	644354	1321766	1048744	1174384	965847	597836	452395	386429
IIa	2d	4aiv	none	GBI	4469							
IIa	2d	4aiv	none	GER	60388	37792		3528		4725	11994	12237
IIa	2d	4aiv	none	IOM	4469							
IIa	2d	4aiv	none	IRL				382094	308108	345522	315028	547160
IIa	2d	4aiv	none	NIR	245437	135432	128125	163967	91936	46027	12276	7369
IIa	2d	4aiv	none	SCO	5602106	5819417	3742534	1058637	528936	189103	120118	205785
IIa	2d	4av	IIA81c	NIR						5564	749	20143
IIa	2d	4av	IIA81c	SCO			894					
IIa	2d	4av	IIA81d	ENG	4648	3043	18232	10271	28946	36376	13251	
IIa	2d	4av	IIA81d	FRA	56608	51467	35490	33433	39321	111310	9914	1459
IIa	2d	4av	IIA81d	SCO			26029	249335	248642	243745	186112	175445
IIa	2d	4av	none	ENG	2716	10267	19375	21702	13553	9008	16188	5679
IIa	2d	4av	none	FRA		2944	1030	18179			5550	
IIa	2d	4av	none	GER			1020	15663	44120	27504	2550	1470
IIa	2d	4av	none	IRL				97368	4503		11124	21186
IIa	2d	4av	none	NIR							1336	
IIa	2d	4av	none	SCO	14059	33479	1382280	3615150	2797769	1797402	1460203	1302911
IIa	2d	4bi	none	BEL	22214	2391		13658	11057	4807	2649	1252
IIa	2d	4bi	none	ENG	96							
IIa	2d	4bi	none	IRL					14890	5067	6676	
IIa	2d	4biii	IIA81c	FRA				30385	35077			
IIa	2d	4biii	none	ENG	288							
IIa	2d	4biii	none	FRA		1472						
IIa	2d	4biii	none	SCO	97861	83069	103897					
IIa	2d	4biv	IIA81c	FRA					1519			
IIa	2d	4biv	none	SCO	4894			60023	151480	119958	81194	
IIa	2d	4ci	none	FRA			19174					
IIa	2d	4ci	none	IRL						128		1703
IIa	2d	4ci	none	SCO		3620	595	51	13723			
IIa	2d	4cii	none	ENG		112		19712				
IIa	2d	4cii	none	FRA	11220	40538	21640	7646	4290	44934	40192	162424
IIa	2d	4cii	none	IRL				2993	3667	64	1808	11015
IIa	2d	4cii	none	SCO	8564	5333	3670	1789				109
IIa	2d	4ciii	none	ENG		36019	40156			44981		
IIa	2d	4ciii	none	FRA		23702	85376	52992				
IIa	2d	4ciii	none	IRL				2529	1026		1468	512
IIa	2d	4ciii	none	SCO		422	2585					
IIa	2d	4civ	none	ENG	218131	145377	211976	289905	203333	113972	15224	36174
IIa	2d	4civ	none	FRA	9261	70642		54464	85376	43202	72128	44160
IIa	2d	4civ	none	GER	28623	30889	7497	101744	78577	28016		
IIa	2d	4civ	none	IRL					11608		600	854
IIa	2d	4civ	none	SCO	4636	4820		42424	53741	33101		403
IIa	2d	4d	IIA81g	FRA		64768						
IIa	2d	4d	none	FRA	1128							
IIa	2d	4d	none	SCO	1505	1416		636	320			
IIa	2d	4e	none	ENG	416434	431522	296907	225031	303353	245410	219565	288636
IIa	2d	4e	none	FRA	48170						164752	474396
IIa	2d	4e	none	IRL	3693	42900	9000	5705	18811	3040		-1
IIa	2d	4e	none	NIR	562					1574		
IIa	2d	4e	none	SCO	73790	86868	173707	124693	148430	306948	371403	518888
IIa	2d	none	IIA81c	ENG	892	656	1079					
IIa	2d	none	IIA81c	IOM					0	0		
IIa	2d	none	IIA81d	ENG						402	1561	
IIa	2d	none	IIA81d	NIR	1432							
IIa	2d	none	none	BEL							442	250
IIa	2d	none	none	ENG	526341	704518	666300	696149	582497	487150	1068827	1035827
IIa	2d	none	none	FRA	309122	139950	185204	226265	353449	140503	223820	203928
IIa	2d	none	none	GBI	130	16	38	30	7391	1123	5084	3471
IIa	2d	none	none	GER	727542	782149	575636	617820	725343	617097	1132573	1071468
IIa	2d	none	none	IOM	130	16	38	30	7391	1123	3932	
IIa	2d	none	none	IRL	4276356	3647525	4092089	3314312	3553699	2414360	2076441	2020043
IIa	2d	none	none	NED			2047046	1691820	3609242	4076962	3287619	2979117
IIa	2d	none	none	NIR	239828	291939	514124	441007	678617	465562	453073	533485
IIa	2d	none	none	SCO	6878379	7499064	8265977	8722833	9141749	8242654	5605938	5034225

Table 6.2.1.2 Trend in effort (GT*days at sea) by existing derogations given in Table 1 of Annex IIA (Coun. Reg. 40/2008) and Member State, 2003-2007. Derogations are sorted by gear, area, special condition (SPECON), and country. Data qualities are summarised in Section 5.5.2 and Table 5.5.2.1.

ANNEX	REG AREA	REG GEAR	SPECON	COUNTRY	2003	2004	2005	2006	2007
IIa	2a	4ai	none	DEN	86440	62035	56790	50564	31941
IIa	2a	4ai	none	SWE	9183	8758	14617	18292	11978
IIa	2a	4aii	IIA81b	SWE		1355	17791	30435	41361
IIa	2a	4aii	IIA81d	DEN	10094	329	32	26	47
IIa	2a	4aii	none	DEN	218247	27140	8208	916	244
IIa	2a	4aii	none	GER	7182	840			1629
IIa	2a	4aii	none	SWE	12086	7014			
IIa	2a	4aiii	IIA81a	DEN				82791	70605
IIa	2a	4aiii	IIA81a	SWE			111020	109117	99617
IIa	2a	4aiii	IIA81d	DEN	8351	4107	2616	1606	2007
IIa	2a	4aiii	IIA81l	DEN				18899	
IIa	2a	4aiii	none	DEN	393376	552684	515897	341851	339513
IIa	2a	4aiii	none	GER	4133	8129	1718	4109	4949
IIa	2a	4aiii	none	SWE	288119	209935	77343	108467	111055
IIa	2a	4aiv	IIA81a	DEN				10834	9018
IIa	2a	4aiv	IIA81a	SWE					542
IIa	2a	4aiv	IIA81c	DEN	5987	13781	17349	787	846
IIa	2a	4aiv	IIA81d	DEN	47	1046			
IIa	2a	4aiv	none	DEN	14609	15674	14365	22238	18395
IIa	2a	4aiv	none	GER	129	205	625	1911	481
IIa	2a	4aiv	none	SWE	7006	3437	2217	886	964
IIa	2a	4av	IIA81a	DEN				491	
IIa	2a	4av	IIA81a	SWE					1290
IIa	2a	4av	IIA81c	DEN	1707		17		
IIa	2a	4av	IIA81d	DEN	99		76		
IIa	2a	4av	IIA81j	DEN				3902	900
IIa	2a	4av	none	DEN	20992	4778	3243	15565	3709
IIa	2a	4av	none	GER		615	205	615	615
IIa	2a	4av	none	SWE	2473		4714		1760
IIa	2a	4ci	none	DEN	3694	3816	12071	11222	5938
IIa	2a	4ci	none	GER	624	308	6903	9211	10356
IIa	2a	4ci	none	SWE	215	128	484	535	743
IIa	2a	4cii	none	DEN	31521	8559	7414	8339	6752
IIa	2a	4cii	none	GER			144	144	411
IIa	2a	4cii	none	SWE	4530	1674	1720	2754	5460
IIa	2a	4ciii	none	DEN	4291	663	488	990	1017
IIa	2a	4ciii	none	GER				132	
IIa	2a	4ciii	none	SWE	121	793	454	244	165
IIa	2a	4civ	IIA81f	DEN	447	200	29		
IIa	2a	4civ	none	DEN	8955	3076	805	686	1053
IIa	2a	4civ	none	SWE	1296	1677	384	440	736
IIa	2a	4d	none	DEN	201	55	732	220	181
IIa	2a	4e	none	SWE	741	271	2625	6710	8069
IIa	2a	none	none	DEN	88455	79182	120270	101628	91372
IIa	2a	none	none	GER				735	
IIa	2a	none	none	SWE	185081	154339	160041	152389	134241
IIa	2b	4ai	none	DEN	1070109	887551	486974	340251	239989
IIa	2b	4ai	none	ENG	25398	195		23	
IIa	2b	4ai	none	FRA	7233	13408	16759	11004	12664
IIa	2b	4ai	none	GER	420			3985	284
IIa	2b	4ai	none	IRL					-1
IIa	2b	4ai	none	NED	2398	3283	5374	21211	13269
IIa	2b	4ai	none	NIR		4338			
IIa	2b	4ai	none	SCO	2986	1866	975	22	20770
IIa	2b	4ai	none	SWE	53810	67104	85420	58336	52906
IIa	2b	4aii	IIA81b	SWE		41219	80671	98128	134478
IIa	2b	4aii	IIA81d	DEN	34388	7299	494	49	
IIa	2b	4aii	IIA81d	ENG	80483	84611	89547	72559	72835
IIa	2b	4aii	IIA81d	FRA	1522119	1688814	1745761	1846455	1392768
IIa	2b	4aii	IIA81d	GBJ	3441	1319	2236	344	1319
IIa	2b	4aii	IIA81d	NIR			4297	20633	9698
IIa	2b	4aii	IIA81d	SCO	1319223	1263402	1104007	921984	833584
IIa	2b	4aiv	IIA81c	DEN	94604	154586	166785	6600	7359

Table 6.2.1.2 continued

ANNEX	REG AREA	REG GEAR	SPECON	COUNTRY	2003	2004	2005	2006	2007
IIa	2b	4aiv	IIA81c	ENG	108059	72052	29159	147891	116800
IIa	2b	4aiv	IIA81c	FRA		119		258	
IIa	2b	4aiv	IIA81c	GER	36821	11253	14689	81831	37530
IIa	2b	4aiv	IIA81c	NIR		711	158	1456	
IIa	2b	4aiv	IIA81c	SCO	75666	84090	63558	37741	41917
IIa	2b	4aiv	IIA81d	DEN	135	883		1119	
IIa	2b	4aiv	IIA81d	ENG	40816	5087	6538	4049	4905
IIa	2b	4aiv	IIA81d	FRA	1589958	1224722	1080465	1119860	1147254
IIa	2b	4aiv	IIA81d	GER	97271	104679	133385	93903	152456
IIa	2b	4aiv	IIA81d	NIR			2430	2754	
IIa	2b	4aiv	IIA81d	SCO	32318	38786	49623	42407	63567
IIa	2b	4aiv	IIA81k	FRA	889			113	
IIa	2b	4aiv	none	DEN	137655	143922	247982	345262	193923
IIa	2b	4aiv	none	ENG	81257	32595	15017	23687	121492
IIa	2b	4aiv	none	FRA	39905	65324	94665	124445	91688
IIa	2b	4aiv	none	GER	38409	44292	37843	250237	172293
IIa	2b	4aiv	none	IRL	710			386	-1
IIa	2b	4aiv	none	NED	122130	88051	138297	149174	178598
IIa	2b	4aiv	none	NIR		672	3024	2025	5174
IIa	2b	4aiv	none	SCO	303939	96761	107627	182862	301170
IIa	2b	4aiv	none	SWE	15381	4221	7034	2076	2678
IIa	2b	4av	IIA81c	DEN	43196	31197	55817	4141	8585
IIa	2b	4av	IIA81c	ENG	10820	12107	5304	2408	3220
IIa	2b	4av	IIA81c	FRA				189	
IIa	2b	4av	IIA81c	NIR		4977	14062	10092	15701
IIa	2b	4av	IIA81c	SCO	316				
IIa	2b	4av	IIA81d	DEN	44977	34195	25859	21492	16978
IIa	2b	4av	IIA81d	ENG	92217	96915	145092	117954	31649
IIa	2b	4av	IIA81d	FRA	62360	8492	14140	35556	3251
IIa	2b	4av	IIA81d	GER	301584	346020	361693	361533	371870
IIa	2b	4av	IIA81d	SCO	102476	140793	147476	136390	78197
IIa	2b	4av	IIA81h	DEN				135809	209067
IIa	2b	4av	none	DEN	3269044	2726833	2975439	2092788	1671527
IIa	2b	4av	none	ENG	422501	242077	225655	435144	210451
IIa	2b	4av	none	FRA	2932	206	840	7077	7014
IIa	2b	4av	none	GER	950848	905544	1212842	1006644	960346
IIa	2b	4av	none	NED	82257	79763	49343	25386	32796
IIa	2b	4av	none	NIR			8000	2400	88
IIa	2b	4av	none	SCO	5980276	4796343	4581958	4360871	4024208
IIa	2b	4av	none	SWE	173741	155461	163934	87397	100725
IIa	2b	4ci	none	DEN	77638	123755	137262	110688	78106
IIa	2b	4ci	none	ENG	2080	897	2315	1580	1972
IIa	2b	4ci	none	FRA	15394	9613	6150	2989	2118
IIa	2b	4ci	none	GER	9950	11073	24300	20888	22456
IIa	2b	4ci	none	NED	16546	7704	10572	39953	28700
IIa	2b	4ci	none	SWE	1744	2972	2409	2127	1467
IIa	2b	4cii	none	DEN	199099	146406	143048	150927	104695
IIa	2b	4cii	none	ENG	3857	962	1643	986	1497
IIa	2b	4cii	none	FRA	10789	3612	11814	10291	10391
IIa	2b	4cii	none	GER	1380	1342	3186	3660	3428
IIa	2b	4cii	none	NED		590	11424	10591	7848
IIa	2b	4cii	none	SCO	899	38		147	
IIa	2b	4cii	none	SWE	4856	5220	5161	5354	4149
IIa	2b	4ciii	none	DEN	262611	198993	185846	171655	65869
IIa	2b	4ciii	none	ENG	27074	29799	17020	15854	5728
IIa	2b	4ciii	none	FRA	3591	1620	3184	1390	221
IIa	2b	4ciii	none	GER	8074	11561	12535	7724	6096
IIa	2b	4ciii	none	NED			124		53
IIa	2b	4ciii	none	SCO	654	1455	963	177	
IIa	2b	4ciii	none	SWE	858	1334	1521	1696	2044

Table 6.2.1.2 continued

ANNEX	REG AREA	REG GEAR	SPECON	COUNTRY	2003	2004	2005	2006	2007
IIa	2b	4civ	none	DEN	11357	18208	8584	6321	9067
IIa	2b	4civ	none	ENG	83567	102326	97962	120105	38546
IIa	2b	4civ	none	FRA	72	209	81	44	580
IIa	2b	4civ	none	GER	43933	30475	38421	43433	12580
IIa	2b	4civ	none	SCO	12004				
IIa	2b	4civ	none	SWE	1028	866	164	235	408
IIa	2b	4d	none	DEN	188	1765	2907	350	1475
IIa	2b	4d	none	ENG	51	85	601	1441	367
IIa	2b	4d	none	FRA	8826	10193	18410	16114	13364
IIa	2b	4d	none	GER				616	22
IIa	2b	4e	none	DEN	741	1186	1023		
IIa	2b	4e	none	ENG	39602	38449	88983	34550	10390
IIa	2b	4e	none	FRA	14205	12375	7128	6146	9732
IIa	2b	4e	none	SCO	34132	1527		1246	226
IIa	2b	4e	none	SWE	2706	3942	3236	32448	50787
IIa	2b	none	IIA81c	ENG	637		1761		1452
IIa	2b	none	IIA81d	ENG					38
IIa	2b	none	IIA81d	GER					1930
IIa	2b	none	none	BEL	335678	293640	232576	221801	257446
IIa	2b	none	none	DEN	7827271	7823698	5708972	5146406	3340230
IIa	2b	none	none	ENG	1477279	1456035	1599827	1349102	1459942
IIa	2b	none	none	FRA	1100003	1219886	1190073	1182653	775942
IIa	2b	none	none	GBG	11994	11792	9868	17029	3387
IIa	2b	none	none	GBI			2556	6279	8603
IIa	2b	none	none	GBJ	20015	25084	23476	20470	11162
IIa	2b	none	none	GER	3894177	3696805	3404222	2768657	2845294
IIa	2b	none	none	IOM			2230	6279	
IIa	2b	none	none	IRL	319186	432924	317343	214737	364715
IIa	2b	none	none	NED	2.1E+07	25794381	23922332	1.9E+07	19191400
IIa	2b	none	none	NIR	126125	105362	65521	75899	75912
IIa	2b	none	none	SCO	2415835	2736056	1730509	1450131	1498072
IIa	2b	none	none	SWE	1217910	1179055	922552	838884	626885
IIa	2b1	4aii	none	DEN	136601	27388	9226	2949	1019
IIa	2b1	4aii	none	GER	1185				
IIa	2b1	4aii	none	SWE	139876	52107			
IIa	2b1	4aiii	IIA81a	DEN				231786	140712
IIa	2b1	4aiii	IIA81a	SWE			148524	125868	121734
IIa	2b1	4aiii	IIA81d	DEN	19167	11958	24278	10800	7571
IIa	2b1	4aiii	IIA81d	SWE				19758	
IIa	2b1	4aiii	IIA81l	DEN				31710	
IIa	2b1	4aiii	none	DEN	1141666	1646603	1106541	687814	543435
IIa	2b1	4aiii	none	GER	12298	2676			
IIa	2b1	4aiii	none	NED	720				
IIa	2b1	4aiii	none	SWE	299476	296039	165605	168546	137074
IIa	2b1	4aiv	IIA81a	DEN				46517	35695
IIa	2b1	4aiv	IIA81a	SWE					91
IIa	2b1	4av	IIA81a	DEN				4801	2049
IIa	2b1	4av	IIA81a	GER				8818	
IIa	2b1	4av	IIA81a	SWE					2142
IIa	2b1	4av	IIA81j	DEN				21397	29319
IIa	2b1	none	none	DEN	33	67			280
IIa	2b1	none	none	GER		3321	12037	8226	6764
IIa	2b1	none	none	NED		21186			
IIa	2b1	none	none	SWE	246451	151806	177092	111446	92379
IIa	2b12	4bi	none	BEL	1503458	1343468	1253622	988824	747382
IIa	2b12	4bi	none	DEN	1940		247	855	
IIa	2b12	4bi	none	FRA	14546	12052	13042	9524	17869
IIa	2b12	4bi	none	GER	523298	683854	720209	534802	413376
IIa	2b12	4bi	none	NED	9754847	10399200	10981996	9610424	10202432
IIa	2b12	4bi	none	SCO	228513	221719	115440	45813	400
IIa	2b12	4bii	none	DEN	3108	4945	255	1495	
IIa	2b12	4bii	none	FRA	3532	1254	448	32	
IIa	2b12	4bii	none	GER	6066	11820	1271	8478	1654
IIa	2b12	4bii	none	NED	41995	50988	15823	18073	24456
IIa	2b12	4biii	IIA81c	ENG	292684	460608	408492	261922	276079
IIa	2b12	4biii	IIA81c	FRA			336		
IIa	2b12	4biii	IIA81c	GER	3948	5030		1960	
IIa	2b12	4biii	IIA81c	NIR		1240			
IIa	2b12	4biii	IIA81c	SCO	429287	391518	329632	297475	118754
IIa	2b12	4biii	IIA81i	ENG	30281	19163	113067	85896	70197

Table 6.2.1.2 continued

ANNEX	REG AREA	REG GEAR	SPECON	COUNTRY	2003	2004	2005	2006	2007
IIa	2b12	4biii	none	BEL	14162	4013	4578	277	4521
IIa	2b12	4biii	none	DEN	41595	21943	36419	27025	59450
IIa	2b12	4biii	none	GER	641	7010	731	4716	377
IIa	2b12	4biii	none	NED	523779	279192	281385	216000	50712
IIa	2b12	4biii	none	SCO	12944	167058	173029	156680	82864
IIa	2b12	4biv	IIA81c	DEN	430736	404300	464184		303
IIa	2b12	4biv	IIA81c	ENG	262738	153990	124219	258000	59750
IIa	2b12	4biv	IIA81c	GER	3870		352	6885	
IIa	2b12	4biv	IIA81c	NIR	181956	125926	7750		
IIa	2b12	4biv	IIA81c	SCO	47562	43929	46509	33720	22056
IIa	2b12	4biv	IIA81e	DEN				89335	
IIa	2b12	4biv	IIA81e	GER	1336			3332	
IIa	2b12	4biv	IIA81i	ENG	48413	33769	49176	115017	23525
IIa	2b12	4biv	IIA81i	NIR	54467	3514			
IIa	2b12	4biv	none	BEL	276759	374816	338588	333712	321144
IIa	2b12	4biv	none	DEN	67612	82598	19203	269028	311689
IIa	2b12	4biv	none	ENG	1248	312			
IIa	2b12	4biv	none	GER	12616	8529	417	15677	13809
IIa	2b12	4biv	none	NED	202319	329312	344751	501619	274980
IIa	2b12	4biv	none	SCO	201939	138745	170755	151792	85434
IIa	2b12	4d	IIA81g	ENG			156	204	78
IIa	2b12	4d	IIA81g	FRA	32259	28328	35986	64000	64467
IIa	2b2	4aii	IIA81c	DEN	381177	303797	216050		
IIa	2b2	4aii	IIA81c	ENG	84519	44646	56079	58043	22150
IIa	2b2	4aii	IIA81c	GER	86410	60002	80669	59564	109931
IIa	2b2	4aii	IIA81c	NIR	2315	628	778	1829	2566
IIa	2b2	4aii	IIA81c	SCO	13860	18816	13776		
IIa	2b2	4aii	none	DEN	416160	436929	423481	488407	244555
IIa	2b2	4aii	none	ENG	171314	116332	130568	120918	79942
IIa	2b2	4aii	none	FRA	195704	121595	139635	121044	145402
IIa	2b2	4aii	none	GER	172924	159892	131069	178481	191884
IIa	2b2	4aii	none	IRL		412			30331
IIa	2b2	4aii	none	NED	392648	443521	492762	544736	503417
IIa	2b2	4aii	none	NIR		288	25940	51446	25716
IIa	2b2	4aii	none	SCO	1761290	1533080	1730606	1603499	1529652
IIa	2b2	4civ	IIA81f	DEN	20990	16735	8926	9717	11527
IIa	2b2	none	none	DEN		17		12	
IIa	2b2	none	none	ENG	723088	690744	788350	664403	683492
IIa	2b2	none	none	FRA	230720	279810	385548	431212	240185
IIa	2b2	none	none	GBI				200	
IIa	2b2	none	none	GER	2052146	1734319	1579235	977089	625951
IIa	2b2	none	none	IOM				200	
IIa	2b2	none	none	IRL	250574	354591	279308	111096	228418
IIa	2b2	none	none	NED	4441319	5471400	5133660	4294539	4171667
IIa	2b2	none	none	NIR	64385	41417	21325	21786	30709
IIa	2b2	none	none	SCO	1721889	1603057	993724	779845	773732
IIa	2b2	none	none	SWE	43001	44200	55035	39695	52135
IIa	2b23	4aiii	IIA81a	DEN					11721
IIa	2b23	4aiii	IIA81a	GER				2442	
IIa	2b23	4aiii	IIA81a	SWE				192	
IIa	2b23	4aiii	IIA81d	DEN	5734	1574			
IIa	2b23	4aiii	IIA81d	ENG	2581	23593	38743	49849	46503
IIa	2b23	4aiii	IIA81d	FRA	125789	156077	70610	22988	17945
IIa	2b23	4aiii	IIA81d	GBJ	1548	2294	2351	2408	2179
IIa	2b23	4aiii	IIA81d	NIR			7951	26046	62354
IIa	2b23	4aiii	IIA81d	SCO	504	201	67	293	
IIa	2b23	4aiii	IIA81l	DEN				62288	
IIa	2b23	4aiii	none	DEN	356108	402554	246660	136925	222368
IIa	2b23	4aiii	none	ENG	78538	57547	58522	76942	71603
IIa	2b23	4aiii	none	FRA	64725	58687	23437	18348	21143
IIa	2b23	4aiii	none	GER	305633	217496	172070	118896	46004
IIa	2b23	4aiii	none	IRL	10				
IIa	2b23	4aiii	none	NED	62646	60122	13142	50089	45817
IIa	2b23	4aiii	none	NIR		3744	46416	55055	107354
IIa	2b23	4aiii	none	SCO	238371	390895	252009	392408	607819
IIa	2b23	4aiii	none	SWE	1574	675	546	150	794
IIa	2b23	4aiv	IIA81a	DEN				4376	385
IIa	2b23	4aiv	IIA81a	GER				4440	
IIa	2b23	4av	IIA81a	DEN				156093	42541
IIa	2b23	4av	IIA81a	GER				49767	
IIa	2b23	4av	IIA81a	SWE				11319	25381

Table 6.2.1.2 continued

ANNEX	REG AREA	REG GEAR	SPECON	COUNTRY	2003	2004	2005	2006	2007
IIa	2b23	4av	IIA81j	DEN				497799	254782
IIa	2b23	none	none	DEN	27	563		30	1
IIa	2b23	none	none	FRA	30516	104059	336296	462107	442997
IIa	2b23	none	none	SCO					249
IIa	2b3	4aii	IIA81c	ENG	4605	7687	6428	5055	2616
IIa	2b3	4aii	none	ENG	4654	1152	4	143	285
IIa	2b3	4aii	none	FRA	783991	783343	924860	889341	913286
IIa	2b3	4aii	none	NED	10792	22956	45693	110721	137286
IIa	2b3	4aii	none	SCO	3842			42576	83030
IIa	2b3	4bi	none	BEL	905416	730984	641599	863098	965278
IIa	2b3	4bi	none	ENG					5391
IIa	2b3	4bi	none	FRA	103965	114416	125179	132495	119148
IIa	2b3	4bi	none	NED		960		0	140
IIa	2b3	4bii	none	FRA	6815	2109	4491	5584	2171
IIa	2b3	4biii	IIA81c	ENG	425		598		320
IIa	2b3	4biii	IIA81i	ENG	1558				
IIa	2b3	4civ	IIA81f	FRA		876			63
IIa	2b3	4d	IIA81g	ENG	911	829	781	529	618
IIa	2b3	4d	IIA81g	FRA	118981	134678	149394	136725	145915
IIa	2b3	none	none	FRA	101746	133642	54646	19343	16563
IIa	2b3	none	none	NED		1200			
IIa	2c	4ai	none	ENG	22				
IIa	2c	4ai	none	IRL	529	682	4594	4081	
IIa	2c	4ai	none	NIR		1446		946	
IIa	2c	4aii	IIA81c	ENG	13421	12627	15105	14960	17003
IIa	2c	4aii	IIA81c	GBI	151	127	610	484	204
IIa	2c	4aii	IIA81c	IOM	1887	1597	3269	608	
IIa	2c	4aii	IIA81c	NIR	216782	135608	141725	119674	96611
IIa	2c	4aii	IIA81d	ENG	11887	16994	13563	18379	19523
IIa	2c	4aii	IIA81d	FRA			222		
IIa	2c	4aii	IIA81d	NIR	414565	420204	420701	400040	447513
IIa	2c	4aii	IIA81d	SCO	7819	7072	3518	1690	2788
IIa	2c	4aii	none	ENG	27619	55863	51244	31972	30392
IIa	2c	4aii	none	FRA	222		888		28
IIa	2c	4aii	none	GBI	1	117	719	141	2400
IIa	2c	4aii	none	IOM	16	93	920	141	
IIa	2c	4aii	none	IRL	423465	479131	513358	492567	523449
IIa	2c	4aii	none	NIR	348015	317860	337734	321738	327124
IIa	2c	4aii	none	SCO	1071	19569	5960	35	70
IIa	2c	4aiii	IIA81d	ENG	2021	1721	2936	2049	572
IIa	2c	4aiii	IIA81d	NIR	130	103	42	708	304
IIa	2c	4aiii	none	ENG	73	17258	12347	4840	2218
IIa	2c	4aiii	none	GBI		26	100	117	162
IIa	2c	4aiii	none	IOM		313	100	117	
IIa	2c	4aiii	none	IRL	4604	368	2181	863	5404
IIa	2c	4aiii	none	NIR		136	484	1223	4416
IIa	2c	4aiii	none	SCO	1163	317			1404
IIa	2c	4aiv	IIA81c	ENG	7278	545	802	497	260
IIa	2c	4aiv	IIA81c	FRA	1366	2500			
IIa	2c	4aiv	IIA81c	GBI	21	5	3		
IIa	2c	4aiv	IIA81c	IOM	258	64	3		
IIa	2c	4aiv	IIA81c	NIR	87400	50302	18162	17802	9789
IIa	2c	4aiv	IIA81d	ENG	35498	28967	8521	1933	383
IIa	2c	4aiv	IIA81d	FRA	14288	24055	18138	10809	4740
IIa	2c	4aiv	IIA81d	NIR	215053	167380	120750	118146	67454
IIa	2c	4aiv	IIA81d	SCO	8714	9761	1446	648	
IIa	2c	4aiv	IIA81k	ENG	126				
IIa	2c	4aiv	IIA81k	FRA	4065	11557			
IIa	2c	4aiv	none	ENG	60991	40312	25098	24109	5387
IIa	2c	4aiv	none	FRA	121863	44198	57110	28789	15442
IIa	2c	4aiv	none	GBI	98				4
IIa	2c	4aiv	none	IOM	1203				
IIa	2c	4aiv	none	IRL	106618	48333	29636	33242	49624
IIa	2c	4aiv	none	NIR	400000	168843	139435	112633	32155
IIa	2c	4aiv	none	SCO	20132	1359		480	
IIa	2c	4av	IIA81c	ENG	507	81	202	182	
IIa	2c	4av	IIA81c	NIR				2054	632
IIa	2c	4av	IIA81d	ENG	4496	525			153
IIa	2c	4av	IIA81d	NIR	1170				
IIa	2c	4av	IIA81d	SCO		507			
IIa	2c	4av	none	ENG	27819	1332	1179		
IIa	2c	4av	none	IRL	3324	693		889	484
IIa	2c	4av	none	NIR	672		640	1584	

Table 6.2.1.2 continued

ANNEX	REG AREA	REG GEAR	SPECON	COUNTRY	2003	2004	2005	2006	2007
IIa	2c	4av	none	SCO	1280	355			
IIa	2c	4bi	none	BEL	675036	497290	567030	379838	278852
IIa	2c	4bi	none	IRL	134244	98872	149315	137940	156331
IIa	2c	4bii	none	IRL	6689	1280	2867		6181
IIa	2c	4bii	none	SCO					384
IIa	2c	4biii	none	IRL	104870	3362	3560		
IIa	2c	4ci	none	ENG				312	116
IIa	2c	4ci	none	IRL	547		6582	19	36
IIa	2c	4ci	none	SCO			413		
IIa	2c	4cii	none	ENG	3038	1805	677	524	240
IIa	2c	4cii	none	FRA			318		
IIa	2c	4cii	none	IRL	7900	7074	192	1681	1970
IIa	2c	4ciii	none	ENG	228				
IIa	2c	4ciii	none	IRL	5398	3513	144	5159	8988
IIa	2c	4ciii	none	NIR		17			
IIa	2c	4civ	none	ENG	46	429	363		
IIa	2c	4civ	none	IRL		61	416		
IIa	2c	4d	none	ENG				45	
IIa	2c	4e	none	ENG	27969	27917	52070	44808	10103
IIa	2c	4e	none	IRL		356			32
IIa	2c	4e	none	SCO	1881				
IIa	2c	none	IIA81c	GBI	60	61	36	64	
IIa	2c	none	IIA81c	IOM	1030	1063	575	435	
IIa	2c	none	IIA81d	ENG			555		
IIa	2c	none	IIA81d	NIR				17	
IIa	2c	none	none	BEL	424	3653	9326	10262	27702
IIa	2c	none	none	ENG	143997	126053	125707	150005	133861
IIa	2c	none	none	FRA	280				2800
IIa	2c	none	none	GBI	41	13	165	1793	2422
IIa	2c	none	none	GBJ	22836	23737	5013	3393	11469
IIa	2c	none	none	IOM	334	13	209	1793	
IIa	2c	none	none	IRL	150169	347483	139458	123896	117439
IIa	2c	none	none	NED	6534	37366	18951	16142	17412
IIa	2c	none	none	NIR	81787	66353	65411	70855	72222
IIa	2c	none	none	SCO	262225	204330	217845	161612	269346
IIa	2d	4ai	none	IRL	5265	27831	5036	15169	8752
IIa	2d	4ai	none	NIR	410				
IIa	2d	4ai	none	SCO	27629	10623	15174		82
IIa	2d	4aii	IIA81c	ENG	4274	1485			
IIa	2d	4aii	IIA81c	GBI	3		3		
IIa	2d	4aii	IIA81c	IOM	32	124	32	248	
IIa	2d	4aii	IIA81c	NIR	28610	16642	10994	13240	18860
IIa	2d	4aii	IIA81d	ENG	4404	1761	1511	2254	4414
IIa	2d	4aii	IIA81d	FRA	9292	8111			322
IIa	2d	4aii	IIA81d	NIR	47194	60769	59492	65056	90492
IIa	2d	4aii	IIA81d	SCO	1073165	886374	763142	703339	656060
IIa	2d	4aii	none	ENG	13823	6465	6710	3395	3743
IIa	2d	4aii	none	FRA	603				
IIa	2d	4aii	none	GBI		195			
IIa	2d	4aii	none	IOM		155			
IIa	2d	4aii	none	IRL	312862	334655	291496	272223	151120
IIa	2d	4aii	none	NIR	4327	21114	24593	35140	76093
IIa	2d	4aii	none	SCO	119245	119754	137107	138464	175789
IIa	2d	4aiii	IIA81d	ENG		1658	3195	3531	4020
IIa	2d	4aiii	IIA81d	NIR		1133		504	5523
IIa	2d	4aiii	IIA81d	SCO	1514	1617	2706	8283	363
IIa	2d	4aiii	none	ENG	4453	2520	2664	6793	336
IIa	2d	4aiii	none	IRL	67475	32307	18259	15592	10939
IIa	2d	4aiii	none	NIR		736	1338	8497	17234
IIa	2d	4aiii	none	SCO	207139	277179	182379	184447	284701
IIa	2d	4aiv	IIA81c	ENG	75				
IIa	2d	4aiv	IIA81c	NIR	12133	1866	380		712
IIa	2d	4aiv	IIA81c	SCO	16420	13796	4558	8464	8793
IIa	2d	4aiv	IIA81d	ENG	64167	11423	1437		
IIa	2d	4aiv	IIA81d	FRA	1550368	1224752	1515201	1170470	1114801
IIa	2d	4aiv	IIA81d	GER			1365	4661	1820
IIa	2d	4aiv	IIA81d	NIR	51755	22987	11307	4544	1309
IIa	2d	4aiv	IIA81d	SCO	250432	264602	136568	94990	90962

Table 6.2.1.2 continued

ANNEX	REG AREA	REG GEAR	SPECON	COUNTRY	2003	2004	2005	2006	2007
IIa	2d	4aiv	none	ENG	33293	23076	11815	7870	1462
IIa	2d	4aiv	none	FRA	409687	324249	210386	173619	148147
IIa	2d	4aiv	none	GER	3886		3213	6169	7462
IIa	2d	4aiv	none	IRL	135072	133481	165030	128855	216953
IIa	2d	4aiv	none	NIR	55407	30844	13702	3854	2335
IIa	2d	4aiv	none	SCO	453662	218411	65757	42189	74516
IIa	2d	4av	IIA81c	NIR			2054	276	7436
IIa	2d	4av	IIA81d	ENG	4888	16617	21324	5789	
IIa	2d	4av	IIA81d	FRA	11827	14011	38477	4299	497
IIa	2d	4av	IIA81d	SCO	109213	109778	107616	82171	77460
IIa	2d	4av	none	ENG	10230	4808	3196	5744	2015
IIa	2d	4av	none	FRA	5534			1500	
IIa	2d	4av	none	GER	11871	30534	18897	1444	984
IIa	2d	4av	none	IRL	32668	1532		4013	8182
IIa	2d	4av	none	NIR				576	
IIa	2d	4av	none	SCO	1529503	1219875	780992	620615	558522
IIa	2d	4bi	none	BEL	6140	5113	2453	1091	636
IIa	2d	4bi	none	IRL		4241	1423	1876	
IIa	2d	4biii	IIA81c	FRA	14060	14451			
IIa	2d	4biv	IIA81c	FRA		703			
IIa	2d	4biv	none	SCO	19249	50073	44549	31348	
IIa	2d	4ci	none	IRL			29		340
IIa	2d	4ci	none	SCO	11	9463			
IIa	2d	4cii	none	ENG	9196				
IIa	2d	4cii	none	FRA	2354	1056	16526	12727	54281
IIa	2d	4cii	none	IRL	1260	1424	15	642	3519
IIa	2d	4cii	none	SCO	402				30
IIa	2d	4ciii	none	ENG			25022		
IIa	2d	4ciii	none	FRA	21420				
IIa	2d	4ciii	none	IRL	816	432		145	75
IIa	2d	4civ	none	ENG	130693	106258	63913	8253	16707
IIa	2d	4civ	none	FRA	22015	34510	17410	29155	17850
IIa	2d	4civ	none	GER	46230	36007	13328		
IIa	2d	4civ	none	IRL		6010		87	197
IIa	2d	4civ	none	SCO	29485	38168	22384		46
IIa	2d	4d	none	SCO	30	89			
IIa	2d	4e	none	ENG	126098	162331	188621	165547	176982
IIa	2d	4e	none	FRA				67925	172877
IIa	2d	4e	none	IRL	2954	8370	1353		-1
IIa	2d	4e	none	NIR			193		
IIa	2d	4e	none	SCO	90757	101144	182746	215189	287478
IIa	2d	none	IIA81c	IOM		248	124		
IIa	2d	none	IIA81d	ENG			105	259	
IIa	2d	none	none	BEL				288	228
IIa	2d	none	none	ENG	441514	364505	284875	725315	687668
IIa	2d	none	none	FRA	156630	275370	103679	163346	156005
IIa	2d	none	none	GBI	78	2275	512	955	1858
IIa	2d	none	none	GER	854453	1010795	834549	1559102	1432392
IIa	2d	none	none	IOM	4164	2330	448	943	
IIa	2d	none	none	IRL	1719923	2026013	1619958	1165532	1125203
IIa	2d	none	none	NED	1433769	3389298	3817127	3078348	2761004
IIa	2d	none	none	NIR	159778	245285	155575	153477	177918
IIa	2d	none	none	SCO	2914839	3017135	2524349	1586455	1324691

Table 6.2.1.3 Trend in effort (maximum numbers of vessels over national fisheries and quarters) by existing derogations given in Table 1 of Annex IIA (Coun. Reg. 40/2008) and Member State, 2000-2007. Derogations are sorted by gear, area, special condition (SPECON), and country. Data qualities are summarised in Section 5.5.2 and Table 5.5.2.1.

ANNEX	REG AREA	REG GEAR	SPECON	COUNTRY	2000	2001	2002	2003	2004	2005	2006	2007
IIa	2a	4ai	none	DEN	21	38	40	38	23	24	17	7
IIa	2a	4ai	none	GER	1							
IIa	2a	4ai	none	SWE	3	7	4	5	5	8	4	3
IIa	2a	4aii	IIA81b	SWE					10	14	29	32
IIa	2a	4aii	IIA81d	DEN			11	5	2	1	1	1
IIa	2a	4aii	none	DEN	142	119	78	62	32	4	2	1
IIa	2a	4aii	none	GER	5	2	2	3	1			2
IIa	2a	4aii	none	SWE	52	48	25	15	6			
IIa	2a	4aiii	IIA81a	DEN							43	38
IIa	2a	4aiii	IIA81a	SWE						23	27	33
IIa	2a	4aiii	IIA81d	DEN			4	6	4	3	1	3
IIa	2a	4aiii	IIA81l	DEN							13	
IIa	2a	4aiii	none	DEN	163	154	155	146	171	142	139	130
IIa	2a	4aiii	none	GER	1	1	1	3	4	2	4	3
IIa	2a	4aiii	none	SWE	58	56	48	69	56	28	32	25
IIa	2a	4aiv	IIA81a	DEN							7	7
IIa	2a	4aiv	IIA81a	SWE								2
IIa	2a	4aiv	IIA81c	DEN			22	7	7	7	1	2
IIa	2a	4aiv	IIA81d	DEN			3	1	1			
IIa	2a	4aiv	none	DEN	73	63	51	13	17	18	17	19
IIa	2a	4aiv	none	GER	6	7		2	1	1	1	3
IIa	2a	4aiv	none	SWE	18	14	10	6	8	4	3	2
IIa	2a	4av	IIA81a	DEN							1	
IIa	2a	4av	IIA81a	SWE								2
IIa	2a	4av	IIA81c	DEN			8	4		1		
IIa	2a	4av	IIA81d	DEN			2	1		1		
IIa	2a	4av	IIA81j	DEN							3	1
IIa	2a	4av	none	DEN	23	16	13	26	7	4	13	10
IIa	2a	4av	none	GER	2		2		1	1	1	1
IIa	2a	4av	none	SWE	2		5	5		2		1
IIa	2a	4biii	none	DEN	1							
IIa	2a	4ci	none	DEN	35	23	31	16	16	28	23	11
IIa	2a	4ci	none	GER			3	2	2	4	4	3
IIa	2a	4ci	none	SWE	3	4	1	3	1	1	1	2
IIa	2a	4cii	none	DEN	31	33	41	32	24	29	31	24
IIa	2a	4cii	none	GER	2	1		1	1	1	2	1
IIa	2a	4cii	none	SWE	12	12	7	10	5	4	6	8
IIa	2a	4ciii	none	DEN	12	15	15	10	6	5	5	7
IIa	2a	4ciii	none	GER							1	
IIa	2a	4ciii	none	SWE	4	3		1	1	3	2	2
IIa	2a	4civ	IIA81f	DEN			5	2	2	1		
IIa	2a	4civ	none	DEN	10	18	12	24	13	5	6	7
IIa	2a	4civ	none	SWE	1	1	2	3	4	2	3	3
IIa	2a	4d	none	DEN	1			1	1	2	1	1
IIa	2a	4e	none	DEN	1	3						
IIa	2a	4e	none	SWE	1	2	4	7	1	4	5	11
IIa	none	2a	none	DEN	12	18	22	18	21	27	19	12
IIa	none	2a	none	GER							1	
IIa	none	2a	none	SWE	20	18	19	15	19	25	23	14
IIa	2b	4ai	none	DEN	79	59	49	46	49	38	25	24
IIa	2b	4ai	none	ENG	2	1	1	2	2		1	
IIa	2b	4ai	none	FRA	4	8	8	7	11	11	13	20
IIa	2b	4ai	none	GER	2	1	1	1			1	1
IIa	2b	4ai	none	IRL								1
IIa	2b	4ai	none	NED	***	***	1	3	3	4	3	5
IIa	2b	4ai	none	NIR					1			
IIa	2b	4ai	none	SCO	3	1		4	1	1	1	1
IIa	2b	4ai	none	SWE	7	14	7	5	6	7	8	6
IIa	2b	4aii	IIA81b	SWE					42	48	61	75
IIa	2b	4aii	IIA81d	DEN			4	5	2	1	1	
IIa	2b	4aii	IIA81d	ENG	12	12	17	20	18	19	18	19
IIa	2b	4aii	IIA81d	FRA	50	56	58	65	78	75	86	93
IIa	2b	4aii	IIA81d	GBJ	1	1	1	1	1	1	1	1
IIa	2b	4aii	IIA81d	NIR			1			2	3	3
IIa	2b	4aii	IIA81d	SCO	95	81	120	114	103	100	97	93
IIa	2b	4aiv	IIA81c	DEN			44	21	17	17	4	2
IIa	2b	4aiv	IIA81c	ENG	22	19	17	7	4	2	4	3
IIa	2b	4aiv	IIA81c	FRA	1		1		1		2	
IIa	2b	4aiv	IIA81c	GER	7	8	10	8	2	3	8	7
IIa	2b	4aiv	IIA81c	NIR					1	1	1	
IIa	2b	4aiv	IIA81c	SCO	9	9	8	7	2	2	2	2
IIa	2b	4aiv	IIA81d	DEN			4	1	1		1	

Table 6.2.1.3 continued

ANNEX	REG AREA	REG GEAR	SPECON	COUNTRY	2000	2001	2002	2003	2004	2005	2006	2007
IIa	2b	4aiv	IIA81d	ENG	20	17	15	9	2	3	3	3
IIa	2b	4aiv	IIA81d	FRA	14	14	14	11	9	8	11	10
IIa	2b	4aiv	IIA81d	GBJ	1		1					
IIa	2b	4aiv	IIA81d	GER	6	6	6	4	4	4	3	4
IIa	2b	4aiv	IIA81d	NIR						1	1	
IIa	2b	4aiv	IIA81d	SCO	46	49	50	17	8	5	6	4
IIa	2b	4aiv	IIA81k	FRA	3	2	2	3			1	
IIa	2b	4aiv	none	DEN	133	155	70	24	29	35	42	34
IIa	2b	4aiv	none	ENG	77	66	44	16	13	8	5	14
IIa	2b	4aiv	none	FRA	12	9	19	10	24	35	14	13
IIa	2b	4aiv	none	GER	22	20	6	7	8	7	10	5
IIa	2b	4aiv	none	IRL				1			1	1
IIa	2b	4aiv	none	NED	***	***	16	7	6	5	5	6
IIa	2b	4aiv	none	NIR		1	1		1	3	3	2
IIa	2b	4aiv	none	SCO	309	297	233	81	23	15	23	27
IIa	2b	4aiv	none	SWE	22	21	11	4	5	4	1	3
IIa	2b	4av	IIA81c	DEN			20	14	9	10	2	1
IIa	2b	4av	IIA81c	ENG	1	1	5	7	7	2	2	1
IIa	2b	4av	IIA81c	FRA							1	
IIa	2b	4av	IIA81c	GER			1					
IIa	2b	4av	IIA81c	NIR					1	1	1	1
IIa	2b	4av	IIA81c	SCO			2	1				
IIa	2b	4av	IIA81d	DEN			23	3	3	3	3	1
IIa	2b	4av	IIA81d	ENG	1	1	8	13	11	8	7	6
IIa	2b	4av	IIA81d	FRA	2	2	2	2	2	1	2	1
IIa	2b	4av	IIA81d	GBJ			1					
IIa	2b	4av	IIA81d	GER		2	7	8	6	5	5	5
IIa	2b	4av	IIA81d	SCO			8	6	5	4	4	3
IIa	2b	4av	IIA81h	DEN							5	9
IIa	2b	4av	none	DEN	41	32	99	86	91	81	83	57
IIa	2b	4av	none	ENG	2	3	35	42	25	18	15	19
IIa	2b	4av	none	FRA	1	1	20	2	2	2	1	1
IIa	2b	4av	none	GER	4	2	15	16	12	13	12	11
IIa	2b	4av	none	NED	***	***	22	17	23	14	11	8
IIa	2b	4av	none	NIR						1	1	1
IIa	2b	4av	none	SCO	13	10	137	184	119	114	110	101
IIa	2b	4av	none	SWE	1	2	14	14	11	9	6	9
IIa	2b	4ci	none	DEN	104	103	85	71	49	49	37	36
IIa	2b	4ci	none	ENG	4	6	4	3	2	3	4	2
IIa	2b	4ci	none	FRA	6	3	6	9	4	5	8	7
IIa	2b	4ci	none	GER	1	1	3	5	4	15	6	4
IIa	2b	4ci	none	NED	***	***	1	1	3	3	7	7
IIa	2b	4ci	none	SCO	1							
IIa	2b	4ci	none	SWE	8	6	7	8	11	7	5	6
IIa	2b	4cii	none	DEN	64	91	86	93	85	112	105	69
IIa	2b	4cii	none	ENG	17	15	13	6	4	3	5	4
IIa	2b	4cii	none	FRA	22	21	23	12	16	18	26	34
IIa	2b	4cii	none	GER	1	1	1	5	1	3	4	2
IIa	2b	4cii	none	NED	***	***			2	4	5	9
IIa	2b	4cii	none	SCO	1	1	2	1	1		1	
IIa	2b	4cii	none	SWE	12	13	13	12	12	13	13	11
IIa	2b	4ciii	none	DEN	118	119	111	85	111	127	130	83
IIa	2b	4ciii	none	ENG	13	13	9	6	7	6	6	3
IIa	2b	4ciii	none	FRA	16	11	9	5	5	3	4	3
IIa	2b	4ciii	none	GER	1		2	3	5	3	3	3
IIa	2b	4ciii	none	NED	***	***				1		1
IIa	2b	4ciii	none	SCO	2	1	1	2	2	1	1	
IIa	2b	4ciii	none	SWE	2	5	2	3	6	6	7	6
IIa	2b	4civ	none	DEN	23	22	13	13	16	12	12	19
IIa	2b	4civ	none	ENG	6	8	7	7	8	6	6	3
IIa	2b	4civ	none	FRA			1	1	1	2	1	3
IIa	2b	4civ	none	GER	4	2	2	2	1	2	2	1
IIa	2b	4civ	none	SCO	2	2	1	2				
IIa	2b	4civ	none	SWE	2	2	2	3	3	2	3	3
IIa	2b	4d	none	DEN			1	1	3	4	2	1
IIa	2b	4d	none	ENG	6	3	2	1	1	2	2	2
IIa	2b	4d	none	FRA	44	54	14	8	16	24	28	28
IIa	2b	4d	none	GER							1	1
IIa	2b	4e	none	DEN	12	12		4	4	13		
IIa	2b	4e	none	ENG	16	15	16	7	5	5	3	4
IIa	2b	4e	none	FRA	3	6	14	10	11	8	7	12

Table 6.2.1.3 continued

ANNEX	REG AREA	REG GEAR	SPECON	COUNTRY	2000	2001	2002	2003	2004	2005	2006	2007
IIa	2b	4e	none	NIR			1					
IIa	2b	4e	none	SCO	4	4	7	2	4		4	1
IIa	2b	4e	none	SWE	9	14	11	13	13	12	14	21
IIa	2b	none	IIA81c	ENG	1			1		2		1
IIa	2b	none	IIA81d	ENG								1
IIa	2b	none	IIA81d	GER	1							1
IIa	none	2b	none	BEL	41	34	29	32	28	28	27	28
IIa	none	2b	none	DEN	145	149	166	152	171	85	114	87
IIa	none	2b	none	ENG	50	53	53	51	50	50	48	48
IIa	none	2b	none	FRA	86	150	157	157	135	127	88	58
IIa	none	2b	none	GBG	2	1	1	1	1	1	1	1
IIa	none	2b	none	GBI						2	3	2
IIa	none	2b	none	GBJ	2	2	2	2	2	2	2	2
IIa	none	2b	none	GER	232	232	228	228	227	233	234	238
IIa	none	2b	none	IOM						2	3	
IIa	none	2b	none	IRL	9	16	20	15	20	16	12	27
IIa	none	2b	none	NED			152	223	299	341	332	328
IIa	none	2b	none	NIR	3	1	4	3	3	3	3	2
IIa	none	2b	none	SCO	46	47	42	51	61	56	38	46
IIa	none	2b	none	SWE	67	69	55	59	57	54	50	46
IIa	2b1	4aii	none	DEN	157	93	82	50	36	3	3	1
IIa	2b1	4aii	none	GER	1			1				
IIa	2b1	4aii	none	SWE	115	102	79	59	45			
IIa	2b1	4aiii	IIA81a	DEN							49	31
IIa	2b1	4aiii	IIA81a	SWE						18	19	46
IIa	2b1	4aiii	IIA81d	DEN			6	4	6	5	3	3
IIa	2b1	4aiii	IIA81d	SWE							1	
IIa	2b1	4aiii	IIA81l	DEN							12	
IIa	2b1	4aiii	none	DEN	167	141	174	147	173	136	122	100
IIa	2b1	4aiii	none	GER				3	2			
IIa	2b1	4aiii	none	NED	***	***		1				
IIa	2b1	4aiii	none	SWE	70	74	72	61	68	46	43	20
IIa	2b1	4aiv	IIA81a	DEN							11	7
IIa	2b1	4aiv	IIA81a	SWE								1
IIa	2b1	4av	IIA81a	DEN							3	2
IIa	2b1	4av	IIA81a	GER							3	
IIa	2b1	4av	IIA81a	SWE								7
IIa	2b1	4av	IIA81j	DEN							4	5
IIa	none	2b1	none	DEN				1	4			1
IIa	none	2b1	none	GER					1	3	2	2
IIa	none	2b1	none	NED					2			
IIa	none	2b1	none	SWE	38	40	42	41	43	46	41	25
IIa	2b12	4bi	none	BEL	91	104	105	106	99	92	89	76
IIa	2b12	4bi	none	DEN		1	1	1		1	1	
IIa	2b12	4bi	none	ENG	9	9	7					
IIa	2b12	4bi	none	FRA	4	3	2	2	3	2	3	3
IIa	2b12	4bi	none	GER	80	56	72	118	95	100	87	75
IIa	2b12	4bi	none	NED	***	***	149	162	183	183	167	154
IIa	2b12	4bi	none	SCO	6	6	6	5	4	3	2	1
IIa	2b12	4bii	none	DEN	1		2	2	2	1	2	
IIa	2b12	4bii	none	ENG	1	1						
IIa	2b12	4bii	none	FRA	1	2	3	2	2	1	1	
IIa	2b12	4bii	none	GER			2	3	5	3	5	3
IIa	2b12	4bii	none	NED	***	***	2	8	7	4	4	9
IIa	2b12	4biii	IIA81c	ENG	22	16	9	9	12	13	9	9
IIa	2b12	4biii	IIA81c	FRA	1	1				1		
IIa	2b12	4biii	IIA81c	GER	7	7	9	2	2		1	
IIa	2b12	4biii	IIA81c	NIR	1	2			1			
IIa	2b12	4biii	IIA81c	SCO	11	11	11	9	10	7	7	6
IIa	2b12	4biii	IIA81i	ENG	7	7	4	5	2	3	3	2
IIa	2b12	4biii	IIA81i	NIR		1						
IIa	2b12	4biii	none	BEL	5	6	7	5	2	2	1	3
IIa	2b12	4biii	none	DEN	9	9	6	6	2	4	2	3
IIa	2b12	4biii	none	ENG	10	10	2					
IIa	2b12	4biii	none	FRA			2					
IIa	2b12	4biii	none	GER	13	14	2	4	5	1	3	1
IIa	2b12	4biii	none	NED	***	***	21	33	23	24	27	10
IIa	2b12	4biii	none	NIR	1							
IIa	2b12	4biii	none	SCO	5	6	2	2	3	5	4	4
IIa	2b12	4biv	IIA81c	DEN			7	7	7	8		1
IIa	2b12	4biv	IIA81c	ENG	3	2	10	9	8	7	9	4
IIa	2b12	4biv	IIA81c	GER			4	2		1	2	
IIa	2b12	4biv	IIA81c	NIR			2	2	2	1		
IIa	2b12	4biv	IIA81c	SCO			7	3	3	2	3	3

Table 6.2.1.3 continued

ANNEX	REG AREA	REG GEAR	SPECON	COUNTRY	2000	2001	2002	2003	2004	2005	2006	2007
IIa	2b12	4biv	IIA81e	DEN							2	
IIa	2b12	4biv	IIA81e	GER			3	1			1	
IIa	2b12	4biv	IIA81i	ENG		1	5	3	2	2	3	2
IIa	2b12	4biv	IIA81i	NIR			1	1	1			
IIa	2b12	4biv	none	BEL	22	27	29	19	30	27	23	27
IIa	2b12	4biv	none	DEN	10	10	3	6	5	5	6	4
IIa	2b12	4biv	none	ENG	1	1	4	1	1			
IIa	2b12	4biv	none	FRA			1					
IIa	2b12	4biv	none	GER	1	2	2	4	2	1	6	10
IIa	2b12	4biv	none	NED	***	***	9	16	31	27	36	33
IIa	2b12	4biv	none	SCO			2	6	5	6	6	3
IIa	2b12	4d	IIA81g	ENG	1	1	1			1	1	1
IIa	2b12	4d	IIA81g	FRA	9	16	32	31	30	37	42	40
IIa	2b2	4aii	IIA81c	DEN			41	34	25	14		
IIa	2b2	4aii	IIA81c	ENG	19	19	29	26	21	21	18	14
IIa	2b2	4aii	IIA81c	GBJ	1							
IIa	2b2	4aii	IIA81c	GER	4	6	6	7	6	6	5	5
IIa	2b2	4aii	IIA81c	NIR			1	1	1	1	2	1
IIa	2b2	4aii	IIA81c	SCO	1	1	1	1	1	1		
IIa	2b2	4aii	none	DEN	38	36	21	34	28	17	26	16
IIa	2b2	4aii	none	ENG	40	29	37	39	28	28	22	22
IIa	2b2	4aii	none	FRA	27	34	32	22	22	22	20	23
IIa	2b2	4aii	none	GER	8	9	5	17	16	17	16	10
IIa	2b2	4aii	none	IRL					1			1
IIa	2b2	4aii	none	NED	***	***	20	41	44	37	39	38
IIa	2b2	4aii	none	NIR		1	1		1	2	6	5
IIa	2b2	4aii	none	SCO	64	56	73	79	62	68	76	70
IIa	2b2	4aii	none	SWE			1					
IIa	2b2	4civ	IIA81f	DEN			18	8	10	6	6	7
IIa	2b2	none	IIA81c	GER		1	1					
IIa	none	2b2	none	DEN			1		1		1	
IIa	none	2b2	none	ENG	2	4	4	4	4	4	4	4
IIa	none	2b2	none	FRA	3	5	4	3	3	3	3	3
IIa	none	2b2	none	GBI							1	
IIa	none	2b2	none	GER	4	4	4	4	6	7	8	6
IIa	none	2b2	none	IOM							1	
IIa	none	2b2	none	IRL				15	20	16	12	27
IIa	none	2b2	none	NED			13	12	12	13	10	11
IIa	none	2b2	none	NIR	3	1	4	3	3	3	3	2
IIa	none	2b2	none	SCO	30	35	27	26	24	23	18	17
IIa	none	2b2	none	SWE	10	15	29	27	23	21	22	19
IIa	2b23	4aiii	IIA81a	DEN								1
IIa	2b23	4aiii	IIA81a	GER							1	
IIa	2b23	4aiii	IIA81a	SWE							1	
IIa	2b23	4aiii	IIA81d	DEN			4	3	2			
IIa	2b23	4aiii	IIA81d	ENG	4	3	3	3	3	3	4	5
IIa	2b23	4aiii	IIA81d	FRA	13	8	10	12	13	10	8	12
IIa	2b23	4aiii	IIA81d	GBJ		1	1	1	1	1	1	1
IIa	2b23	4aiii	IIA81d	NIR						2	4	6
IIa	2b23	4aiii	IIA81d	SCO	1	1	2	1	1	1	1	
IIa	2b23	4aiii	IIA81l	DEN							6	
IIa	2b23	4aiii	none	DEN	28	36	43	52	44	32	21	19
IIa	2b23	4aiii	none	ENG	3	3	1	13	9	7	13	9
IIa	2b23	4aiii	none	FRA	11	8	13	17	15	14	12	14
IIa	2b23	4aiii	none	GER		2	2	20	20	17	13	7
IIa	2b23	4aiii	none	IRL				1				
IIa	2b23	4aiii	none	NED	***	***	1	5	8	2	7	5
IIa	2b23	4aiii	none	NIR					1	7	7	13
IIa	2b23	4aiii	none	SCO	1	1	2	25	37	29	58	54
IIa	2b23	4aiii	none	SWE		1	1	2	1	1	1	2
IIa	2b23	4aiv	IIA81a	DEN							3	1
IIa	2b23	4aiv	IIA81a	GER							1	
IIa	2b23	4av	IIA81a	DEN							5	2
IIa	2b23	4av	IIA81a	GER							3	
IIa	2b23	4av	IIA81a	SWE							1	6
IIa	2b23	4av	IIA81j	DEN							16	9
IIa	none	2b23	none	DEN	2		1	1	3		1	1
IIa	none	2b23	none	FRA	11	12	21	32	89	164	180	179
IIa	none	2b23	none	SCO								2
IIa	2b3	4aii	IIA81c	ENG	10	8	7	5	4	4	3	2
IIa	2b3	4aii	IIA81c	GBJ	1	1	1					
IIa	2b3	4aii	none	ENG	8	4	2	3	2	1	1	2
IIa	2b3	4aii	none	FRA	68	74	92	94	96	123	140	138
IIa	2b3	4aii	none	GBG		1						
IIa	2b3	4aii	none	NED	***	***	2	3	5	9	8	7

Table 6.2.1.3 continued

ANNEX	REG AREA	REG GEAR	SPECON	COUNTRY	2000	2001	2002	2003	2004	2005	2006	2007
IIa	2b3	4aii	none	SCO		1		3			2	3
IIa	2b3	4bi	none	BEL	67	63	65	72	77	74	77	68
IIa	2b3	4bi	none	ENG	7	5	4					3
IIa	2b3	4bi	none	FRA	26	26	24	27	29	23	29	29
IIa	2b3	4bi	none	NED	***	***	1		1		1	1
IIa	2b3	4bii	none	ENG	1							
IIa	2b3	4bii	none	FRA	2	4	8	6	3	3	4	3
IIa	2b3	4biii	IIA81c	ENG	2	1	1	1		1		1
IIa	2b3	4biii	IIA81c	FRA	1	1						
IIa	2b3	4biii	IIA81i	ENG		1	1	1				
IIa	2b3	4biii	none	ENG	1							
IIa	2b3	4biii	none	FRA	1	1						
IIa	2b3	4biv	IIA81c	ENG	1							
IIa	2b3	4civ	IIA81f	FRA					2			1
IIa	2b3	4d	IIA81g	ENG	1	1	1	1	1	1	1	1
IIa	2b3	4d	IIA81g	FRA	4	45	68	73	59	75	72	82
IIa	none	2b3	none	FRA	34	54	55	68	67	44	14	11
IIa	none	2b3	none	NED					2			
IIa	2c	4ai	none	ENG				1				
IIa	2c	4ai	none	IRL				2	1	10	5	
IIa	2c	4ai	none	NIR					1		1	
IIa	2c	4aii	IIA81c	ENG	12	10	12	9	7	7	8	6
IIa	2c	4aii	IIA81c	GBI	1	2	1	2	2	2	1	1
IIa	2c	4aii	IIA81c	GBJ	1							
IIa	2c	4aii	IIA81c	IOM	1	2	2	2	2	3	1	
IIa	2c	4aii	IIA81c	NIR	15	15	14	13	11	11	9	7
IIa	2c	4aii	IIA81d	ENG	7	6	7	6	7	6	6	6
IIa	2c	4aii	IIA81d	FRA	3					1		
IIa	2c	4aii	IIA81d	NIR	42	47	52	52	51	55	52	54
IIa	2c	4aii	IIA81d	SCO	8	4	5	6	5	4	1	2
IIa	2c	4aii	none	ENG	16	10	4	6	6	6	7	5
IIa	2c	4aii	none	FRA	2	1	1	1		1		1
IIa	2c	4aii	none	GBI	1	2		1	1	2	1	3
IIa	2c	4aii	none	IOM	1	2		1	1	2	1	
IIa	2c	4aii	none	IRL				35	35	41	38	50
IIa	2c	4aii	none	NIR	62	52	36	28	20	26	26	28
IIa	2c	4aii	none	SCO	2	2		1	1	1	1	1
IIa	2c	4aiii	IIA81d	ENG	2	1	1	2	2	4	3	2
IIa	2c	4aiii	IIA81d	FRA		1						
IIa	2c	4aiii	IIA81d	NIR				1	1	1	1	1
IIa	2c	4aiii	none	ENG	6	2	1	1	4	3	3	2
IIa	2c	4aiii	none	FRA	1							
IIa	2c	4aiii	none	GBI		2	2		1	2	1	2
IIa	2c	4aiii	none	IOM		2	2		1	2	1	
IIa	2c	4aiii	none	IRL				2	2	2	1	5
IIa	2c	4aiii	none	NIR	1	1			1	1	3	1
IIa	2c	4aiii	none	SCO				2	1			2
IIa	2c	4aiv	IIA81c	ENG	3	10	9	9	3	3	2	3
IIa	2c	4aiv	IIA81c	FRA			3	1	1			
IIa	2c	4aiv	IIA81c	GBI		2		1	1	1		
IIa	2c	4aiv	IIA81c	IOM		2		1	1	1		
IIa	2c	4aiv	IIA81c	NIR	5	6	6	7	5	3	2	2
IIa	2c	4aiv	IIA81d	ENG	6	4	6	4	2	2	2	1
IIa	2c	4aiv	IIA81d	FRA	6	4	12	7	9	8	7	3
IIa	2c	4aiv	IIA81d	NIR	15	14	14	12	11	9	12	8
IIa	2c	4aiv	IIA81d	SCO	2	4	3	1	3	1	1	
IIa	2c	4aiv	IIA81k	ENG			1	1				
IIa	2c	4aiv	IIA81k	FRA	1	5	5	2	3			
IIa	2c	4aiv	none	ENG	7	10	9	10	5	3	2	2
IIa	2c	4aiv	none	FRA	12	20	14	16	8	7	7	6
IIa	2c	4aiv	none	GBI	2			2				1
IIa	2c	4aiv	none	IOM	2			2				
IIa	2c	4aiv	none	IRL				15	13	8	6	10
IIa	2c	4aiv	none	NIR	29	28	27	26	14	13	8	6
IIa	2c	4aiv	none	SCO	5	2	3	4	2		1	
IIa	2c	4av	IIA81c	ENG	1	2	1	2	1	1	1	
IIa	2c	4av	IIA81c	NIR							1	1
IIa	2c	4av	IIA81d	ENG	2	1	1	2	1			1
IIa	2c	4av	IIA81d	NIR				1				
IIa	2c	4av	IIA81d	SCO					1			
IIa	2c	4av	none	ENG	1	1		4	1	1		

Table 6.2.1.3 continued

ANNEX	REG AREA	REG GEAR	SPECON	COUNTRY	2000	2001	2002	2003	2004	2005	2006	2007
IIa	2c	4av	none	FRA			1					
IIa	2c	4av	none	IRL				1	1		1	1
IIa	2c	4av	none	NIR				1		1	1	
IIa	2c	4av	none	SCO				1	1			
IIa	2c	4bi	none	BEL	22	23	30	33	35	34	26	24
IIa	2c	4bi	none	ENG	3	3	2					
IIa	2c	4bi	none	IRL				8	8	10	10	15
IIa	2c	4bii	none	IRL				2	1	2		2
IIa	2c	4bii	none	SCO								1
IIa	2c	4biii	none	ENG	1							
IIa	2c	4biii	none	IRL				2	2	1		
IIa	2c	4ci	none	ENG	1						1	1
IIa	2c	4ci	none	IRL				1		9	1	1
IIa	2c	4ci	none	SCO						1		
IIa	2c	4cii	none	ENG	4	5	3	3	2	1	1	1
IIa	2c	4cii	none	FRA						1		
IIa	2c	4cii	none	IRL				3	2	2	4	4
IIa	2c	4ciii	none	ENG	2		1	1				
IIa	2c	4ciii	none	IRL				4	2	1	6	8
IIa	2c	4ciii	none	NIR	1	1	1		1			
IIa	2c	4civ	none	ENG		1	1	1	1	1		
IIa	2c	4civ	none	IRL					1	1		
IIa	2c	4d	none	ENG	1						1	
IIa	2c	4e	none	ENG	6	6	5	2	3	5	3	2
IIa	2c	4e	none	FRA			1					
IIa	2c	4e	none	IRL		1			1			1
IIa	2c	4e	none	SCO		1		1				
IIa	2c	none	IIA81c	GBI	1	1	1	1	1	1	1	
IIa	2c	none	IIA81c	IOM	1	1	2	2	1	2	1	
IIa	2c	none	IIA81d	ENG	1					1		
IIa	2c	none	IIA81d	NIR							1	
IIa	none	2c	none	BEL		1		1	1	2	5	4
IIa	none	2c	none	ENG	7	9	10	13	16	13	16	14
IIa	none	2c	none	FRA				1				1
IIa	none	2c	none	GBI	2	2	1	2	1	2	2	3
IIa	none	2c	none	GBJ	1	1	2	2	3	1	1	1
IIa	none	2c	none	IOM	2	2	1	2	1	2	2	
IIa	none	2c	none	IRL	88	63	64	16	15	15	13	22
IIa	none	2c	none	NED			2	1	2	3	2	1
IIa	none	2c	none	NIR	12	9	6	5	6	7	6	6
IIa	none	2c	none	SCO	20	19	15	18	21	25	24	31
IIa	2d	4ai	none	IRL				5	1	7	9	10
IIa	2d	4ai	none	NIR	1		1	1				
IIa	2d	4ai	none	SCO	10	6	6	6	6	4		1
IIa	2d	4aii	IIA81c	ENG	1		2	1	1			
IIa	2d	4aii	IIA81c	GBI				1		1		
IIa	2d	4aii	IIA81c	IOM				1	1	1	1	
IIa	2d	4aii	IIA81c	NIR	6	7	9	7	6	3	5	3
IIa	2d	4aii	IIA81c	SCO	1	1	1					
IIa	2d	4aii	IIA81d	ENG	3	1	2	4	2	1	3	4
IIa	2d	4aii	IIA81d	FRA	2	1	2	4	2			1
IIa	2d	4aii	IIA81d	NIR	14	19	19	18	20	17	25	23
IIa	2d	4aii	IIA81d	SCO	148	149	161	155	121	95	94	85
IIa	2d	4aii	none	ENG	4	2		4	4	3	1	1
IIa	2d	4aii	none	FRA	1	1		1				
IIa	2d	4aii	none	GBI					1			
IIa	2d	4aii	none	IOM					1			
IIa	2d	4aii	none	IRL				21	24	26	19	21
IIa	2d	4aii	none	NIR	14	5	5	4	6	8	11	13
IIa	2d	4aii	none	SCO	48	36	15	20	23	16	21	26
IIa	2d	4aiii	IIA81d	ENG		1			1	1	1	1
IIa	2d	4aiii	IIA81d	NIR	1				1		1	2
IIa	2d	4aiii	IIA81d	SCO		1	2	1	1	1	1	1
IIa	2d	4aiii	none	ENG	1		1	2	1	1	3	1
IIa	2d	4aiii	none	IRL				6	3	4	4	4
IIa	2d	4aiii	none	NIR		1	1		1	2	4	6
IIa	2d	4aiii	none	SCO	3	2	1	42	48	28	30	50
IIa	2d	4aiv	IIA81c	ENG				1				
IIa	2d	4aiv	IIA81c	NIR	3	2	3	2	1	1		1
IIa	2d	4aiv	IIA81c	SCO	2	1	4	3	1	1	2	1
IIa	2d	4aiv	IIA81d	ENG	5	4	4	3	4	1		

Table 6.2.1.3 continued

ANNEX	REG AREA	REG GEAR	SPECON	COUNTRY	2000	2001	2002	2003	2004	2005	2006	2007
IIa	2d	4aiv	IIA81d	FRA	29	29	21	20	16	15	15	10
IIa	2d	4aiv	IIA81d	GER		1	2			1	2	1
IIa	2d	4aiv	IIA81d	NIR	11	11	9	9	7	6	5	2
IIa	2d	4aiv	IIA81d	SCO	36	42	40	26	11	10	8	7
IIa	2d	4aiv	none	ENG	11	9	7	7	8	3	2	1
IIa	2d	4aiv	none	FRA	26	31	26	17	17	12	12	6
IIa	2d	4aiv	none	GBI	1							
IIa	2d	4aiv	none	GER	2	4		1		1	1	1
IIa	2d	4aiv	none	IOM	1							
IIa	2d	4aiv	none	IRL				15	8	14	14	14
IIa	2d	4aiv	none	NIR	19	13	14	11	9	8	4	3
IIa	2d	4aiv	none	SCO	137	136	95	41	23	12	9	17
IIa	2d	4av	IIA81c	NIR						1	1	1
IIa	2d	4av	IIA81c	SCO			1					
IIa	2d	4av	IIA81d	ENG	1	1	1	2	2	2	1	
IIa	2d	4av	IIA81d	FRA	3	2	3	2	4	4	2	1
IIa	2d	4av	IIA81d	SCO			3	2	1	1	1	1
IIa	2d	4av	none	ENG	1	1	3	3	1	1	1	1
IIa	2d	4av	none	FRA		1	1	1			1	
IIa	2d	4av	none	GER			1	1	2	2	1	1
IIa	2d	4av	none	IRL				1	1		1	3
IIa	2d	4av	none	NIR							1	
IIa	2d	4av	none	SCO	6	8	49	83	53	37	35	33
IIa	2d	4bi	none	BEL	2	1		2	2	1	1	1
IIa	2d	4bi	none	ENG	1							
IIa	2d	4bi	none	IRL					2	1	1	
IIa	2d	4biii	IIA81c	FRA				1	1			
IIa	2d	4biii	none	ENG	1							
IIa	2d	4biii	none	FRA		1						
IIa	2d	4biii	none	SCO	2	2	1					
IIa	2d	4biv	IIA81c	FRA					1			
IIa	2d	4biv	none	SCO	1			1	2	1	1	
IIa	2d	4ci	none	FRA			1					
IIa	2d	4ci	none	IRL						1		2
IIa	2d	4ci	none	SCO		1	1	1	1			
IIa	2d	4cii	none	ENG		1		1				
IIa	2d	4cii	none	FRA	1	1	1	1	1	3	2	2
IIa	2d	4cii	none	IRL				1	2	1	1	6
IIa	2d	4cii	none	SCO	2	1	1	1				1
IIa	2d	4ciii	none	ENG		2	2			1		
IIa	2d	4ciii	none	FRA		1	1	1				
IIa	2d	4ciii	none	IRL				1	1		2	1
IIa	2d	4ciii	none	SCO		2	2					
IIa	2d	4civ	none	ENG	7	5	5	5	4	2	1	2
IIa	2d	4civ	none	FRA	1	1		1	1	1	1	1
IIa	2d	4civ	none	GER	2	3	1	3	3	1		
IIa	2d	4civ	none	IRL					1		1	5
IIa	2d	4civ	none	SCO	3	5		2	2	3		2
IIa	2d	4d	IIA81g	FRA		1						
IIa	2d	4d	none	FRA	1							
IIa	2d	4d	none	SCO	1	1		1	1			
IIa	2d	4e	none	ENG	9	9	7	4	5	4	5	6
IIa	2d	4e	none	FRA	2						4	6
IIa	2d	4e	none	IRL	1	1	1	1	1	1		1
IIa	2d	4e	none	NIR	2					2		
IIa	2d	4e	none	SCO	4	4	6	6	4	3	6	7
IIa	2d	none	IIA81c	ENG	1	1	1					
IIa	2d	none	IIA81c	IOM					1	1		
IIa	2d	none	IIA81d	ENG						1	1	
IIa	2d	none	IIA81d	NIR	1							
IIa	none	2d	none	BEL							1	1
IIa	none	2d	none	ENG	4	6	5	5	4	4	4	6
IIa	none	2d	none	FRA	3	3	4	3	4	4	3	3
IIa	none	2d	none	GBI	2	1	1	2	3	2	4	2
IIa	none	2d	none	GER	4	4	4	4	4	3	4	4
IIa	none	2d	none	IOM	2	1	1	3	3	2	3	
IIa	none	2d	none	IRL	57	36	40	32	41	29	40	41
IIa	none	2d	none	NED			10	8	11	13	9	8
IIa	none	2d	none	NIR	4	4	4	4	5	4	4	6
IIa	none	2d	none	SCO	61	62	56	56	50	46	42	38

6.2.2. Trend in effort by derogation in management area 2a: Kattegat

All member states fishing in this area have reported their effort data, including mesh size range category and derogations and the overall confidence in the results are high. The total nominal effort in the Kattegat decreased by 35 % between the years 2002-2007.

The fisheries in Kattegat are dominated by Denmark and Sweden using predominantly trawls (app.93 % of the total effort in 2007), primarily with a mesh size of 90-99 mm (77%). Beam trawls are forbidden and the effort deployed by passive gears (gill-trammel nets and longline) are relatively small (app 4% of annual effort).The amount of nominal effort which could not be assigned to the existing gear categories was around 2% in 2007, partly constituted by trawls with mesh size of 32-54 and 55-69 mm targeting shrimp or pelagic resources.

The overall decrease in effort by 35 % of the identified gear categories compared to 2002 is mainly due to a decrease in trawls of 70-89 mm mesh size, (87%) and trawls with mesh > 100mm mesh size (69%). A major shift occurred between 2003 and 2004 when the use of 70-89 mm without sorting grid was banned. The ban of the 70-79 mm trawl caused an increase in effort by trawls in 90-99 mm mesh size category during 2004.Effort by this category, however has decreased by 10 during the period of 2005-2007. Overall the overall effort in this fishery has increased by 9 % since 2002. The decrease in the use of the 100m mesh size trawl could probably be an effect of the lower number of days given to this mesh size category in comparison with 90-99 mm gear. A similar major decrease can be seen in the gillnetters, where effort has decreased by 49 % since 2002.

Although there are several special conditions available for Kattegatt there are very few that are used at all or to a low extent in 2007.

The special condition IIA83a (previously: IIA81a) (120mm square mesh panel) was the special condition with the highest uptake , representing 29% of the nominal effort in the gear category 4aiii, 34% of the nominal effort in the gear category 4aiv and 19% of the nominal effort in gear category 4av.

In fact the derogation "4 aii IIA83a" represents 22 % of the total nominal effort deployed in the Kattegat in 2007.

Notice, that the special condition IIA81l (95 mm square mesh window) that represented 3 % of the effort by the 4aiii gear category in 2006 has disappeared in 2007. It was solely used by the Danish fishery in 2006. However, according to the information provided by the Danish fishing industry, this special condition was not used at all in 2007.

The highest uptake of any special condition within a gear group is the sorting grid, IIA83b, in the aii gear category representing 94 % of the effort. This is due to that this gear class is only allowed to be used with this special condition. The IIA83b derogation is only used by one member state, and constitutes only 5 % of the total effort in the Kattegat 2007.

The total maximum number of vessels in Kattegat has steadily decreased between 2000 and 2005, from 614 boats to 419 respectively (Figure 6.2.2.2). This trend is mainly due to a decrease in the gear categories 4.a.ii (trawls 70-89 mm) and 4.a.iv (trawls 100-119 mm) (Figure 6.2.2.4) which corresponds well with the trends in nominal effort for these categories. Between 2005 and 2006 the maximum number of boats increased from 390 to 460 boats, mainly in the category 4.a.iii (trawls 90-99 mm) with the derogation IIA81a (120 mm escape window), which can be seen in Figures 6.2.2.4 and 6.2.2.6, but also in 4aii, IIa81b (trawls 70-89mm with sorting grid).

One reason for this could be the discussion in 2006 about using Kattegatt as a test area for effort control, which might have caused fishermen to trawl there to get a catch record for the area. Another contributing factor might be the pelagic system in Sweden with individual quotas which has been introduced in 2007. Owners of pelagic boats have been buying additional vessels to use for *Nephrops* fishery and this process could have started already in 2006. However in 2007 the number of vessels has decreased to 419. The introduction of the system of exchangeable vessel quota shares (FKA system) in 2007 may be part of the explanation for this decrease.

It should be kept in mind that number of vessels is an uncertain estimation since one vessel could have used more than one gear and mesh size during the year and therefore have been counted more than once. Furthermore, the Kattegat represents a rather small management area boats may leave or enter the area and thus be counted in several areas simultaneously.

The relative trends were compared for effort measured in kWdays, GTdays and number of vessels (Figure 6.2.2.7). kW*days and GTd*days often show very similar patterns, although this does not apply to all categories with low levels of effort. But in most cases, the number of vessels is not well correlated to the two other measures, and the patterns observed cannot be easily interpreted. This is consistent with the remark above underlying that number of vessels, estimated as done here, may not be an adequate measure of effort.

Table 6.2.2.1 Kattegat: Trend in nominal effort (Kw *days at sea) by derogation 2000-2007

ANNEX	REG AREA	REG GEAR	SPECON	2000	2001	2002	2003	2004	2005	2006	2007	rel change to 200
IIa	2a	4ai	none	287152	438041	593865	573904	381413	368846	327997	214054	-0.64
IIa	2a	4aii	IIA81b					9912	113990	165426	233076	0
IIa	2a	4aii	IIA81d			73062	63027	2532	366	271	128	-1
IIa	2a	4aii	none	2481986	2157670	1770005	1663390	208459	51707	4424	14413	-1
IIa	2a	4aiii	IIA81a						546830	1023863	943130	0
IIa	2a	4aiii	IIA81d			22056	54029	29423	17703	9745	13259	-0.4
IIa	2a	4aiii	IIA81l							109233		0
IIa	2a	4aiii	none	3008272	3400008	2966990	3418168	4027722	2999459	2369559	2296884	-0.23
IIa	2a	4aiv	IIA81a							61953	59204	0
IIa	2a	4aiv	IIA81c			141996	44018	80856	98962	6651	5447	-0.96
IIa	2a	4aiv	IIA81d			3443	276	5370				-1
IIa	2a	4aiv	none	944800	949681	423665	113409	96125	92811	118496	106766	-0.75
IIa	2a	4av	IIA81a							1817	6966	0
IIa	2a	4av	IIA81c			13610	12321		93			-1
IIa	2a	4av	IIA81d			7324	647		324			-1
IIa	2a	4av	IIA81j							11967	2104	0
IIa	2a	4av	none	82879	44037	80558	105478	28762	29599	51758	26793	-0.67
IIa	2a	4biii	none	121								0
IIa	2a	4ci	none	121334	75981	113199	38286	39660	104041	104170	74382	-0.34
IIa	2a	4cii	none	126156	158658	147559	242919	77525	71018	86726	88448	-0.4
IIa	2a	4ciii	none	43780	57659	67471	33139	9993	7981	9533	11345	-0.83
IIa	2a	4civ	IIA81f			12157	4111	2663	386			-1
IIa	2a	4civ	none	13486	32113	29088	69269	31396	6659	7667	13331	-0.54
IIa	2a	4d	none	243			1172	380	5181	2205	1256	0
IIa	2a	4e	none	867	5870	3651	5682	1376	10684	27478	37856	9.37
IIa	2a	none	none	565274	863601	823200	981300	886916	944073	894918	763341	-0.072715015
sum				7676350	8183319	7292899	7424545	5920483	5470713	5395857	4912183	-0.326443024

Table 6.2.2.2 Kattegat: Trend in effort (GT*days at sea) by derogation, 2003-2006.

ANNEX	REG AREA	REG GEAR	SPECON	2003	2004	2005	2006	2007	Rel.Change to 2002
IIa	2a	4ai	none	95623	70793	71407	68856	43919	-0.54
IIa	2a	4aii	IIA81b		1355	17791	30435	41361	
IIa	2a	4aii	IIA81d	10094	329	32	26	47	-1
IIa	2a	4aii	none	237515	34994	8208	916	1873	-0.99
IIa	2a	4aiii	IIA81a			111020	191908	170222	
IIa	2a	4aiii	IIA81d	8351	4107	2616	1606	2007	-0.76
IIa	2a	4aiii	IIA81l				18899		
IIa	2a	4aiii	none	685628	770748	594958	454427	455517	-0.34
IIa	2a	4aiv	IIA81a				10834	9560	
IIa	2a	4aiv	IIA81c	5987	13781	17349	787	846	-0.86
IIa	2a	4aiv	IIA81d	47	1046				-1
IIa	2a	4aiv	none	21744	19316	17207	25035	19840	-0.09
IIa	2a	4av	IIA81a				491	1290	
IIa	2a	4av	IIA81c	1707		17			-1
IIa	2a	4av	IIA81d	99		76			-1
IIa	2a	4av	IIA81j				3902	900	
IIa	2a	4av	none	23465	5393	8162	16180	6084	-0.74
IIa	2a	4ci	none	4533	4252	19458	20968	17037	2.76
IIa	2a	4cii	none	36051	10233	9278	11237	12623	-0.65
IIa	2a	4ciii	none	4412	1456	942	1366	1182	-0.73
IIa	2a	4civ	IIA81f	447	200	29			-1
IIa	2a	4civ	none	10251	4753	1189	1126	1789	-0.83
IIa	2a	4d	none	201	55	732	220	181	-0.1
IIa	2a	4e	none	741	271	2625	6710	8069	9.89
IIa	2a	none	none	273536	233521	280311	254752	225613	-0.18
sum				1420432	1176603	1163407	1120681	1019960	-0.28

Table 6.2.2.3 Kattegat: Trend in effort (number of vessels, sum over maximum number of national vessels) by derogation, 2000-2006.

ANNEX	REG AREA C	REG GEA	SPECO	2000	2001	2002	2003	2004	2005	2006	2007	Rel.change to 2002
IIa	2a	4ai	none	25	45	44	43	28	32	21	10	-0.77
IIa	2a	4aii	IIA81b					10	14	29	32	
IIa	2a	4aii	IIA81d			11	5	2	1	1	1	-0.91
IIa	2a	4aii	none	199	169	105	80	39	4	2	3	-0.97
IIa	2a	4aiii	IIA81a						23	70	71	
IIa	2a	4aiii	IIA81d			4	6	4	3	1	3	-0.25
IIa	2a	4aiii	IIA81l							13		
IIa	2a	4aiii	none	222	211	204	218	231	172	175	158	-0.23
IIa	2a	4aiv	IIA81a							7	9	
IIa	2a	4aiv	IIA81c			22	7	7	7	1	2	-0.91
IIa	2a	4aiv	IIA81d			3	1	1				-1
IIa	2a	4aiv	none	97	84	61	21	26	23	21	24	-0.61
IIa	2a	4av	IIA81a							1	2	
IIa	2a	4av	IIA81c			8	4		1			-1
IIa	2a	4av	IIA81d			2	1		1			-1
IIa	2a	4av	IIA81j							3	1	
IIa	2a	4av	none	27	16	20	31	8	7	14	12	-0.4
IIa	2a	4biii	none	1								
IIa	2a	4ci	none	38	27	35	21	19	33	28	16	-0.54
IIa	2a	4cii	none	45	46	48	43	30	34	39	33	-0.31
IIa	2a	4ciii	none	16	18	15	11	7	8	8	9	-0.4
IIa	2a	4civ	IIA81f			5	2	2	1			-1
IIa	2a	4civ	none	11	19	14	27	17	7	9	10	-0.29
IIa	2a	4d	none	1			1	1	2	1	1	
IIa	2a	4e	none	2	5	4	7	1	4	5	11	1.75
IIa	2a	none	none	32	36	41	33	40	52	43	26	-0.37
Sum				716	676	646	562	473	429	492	434	-0.33

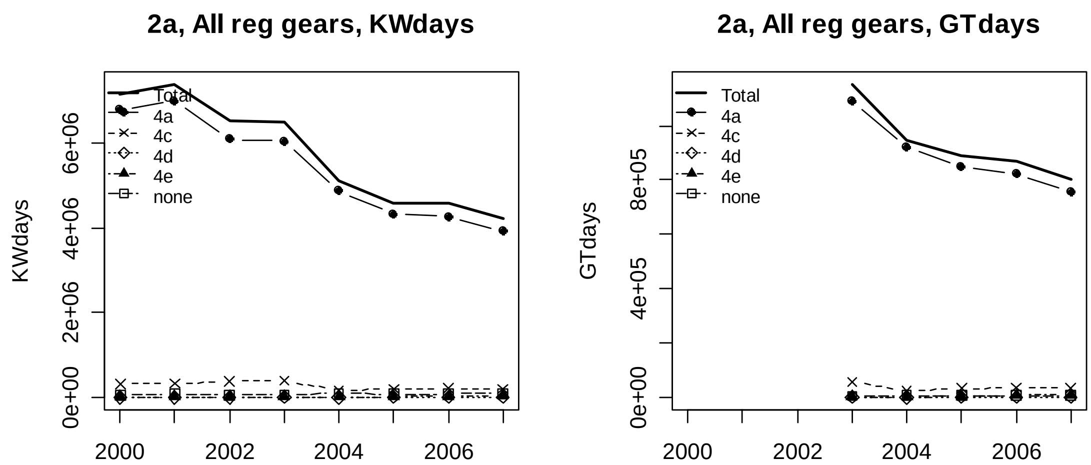


Figure 6.2.2.1. Kattegat: Trend in nominal effort by gear types, 2000-2007. Left: kW*days, right: GT*days. 4a = demersal trawl, 4b = Beam trawl, 4c = Gillnet, 4d = Trammel net, 4e = Longline.

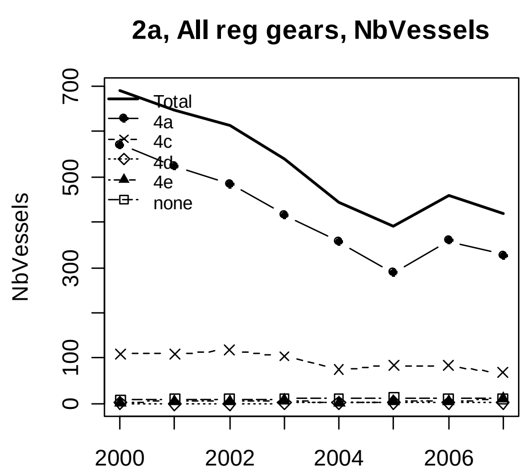


Figure 6.2.2.2 Kattegat: Trend in maximum number of vessels by gear types, 2000-2007.

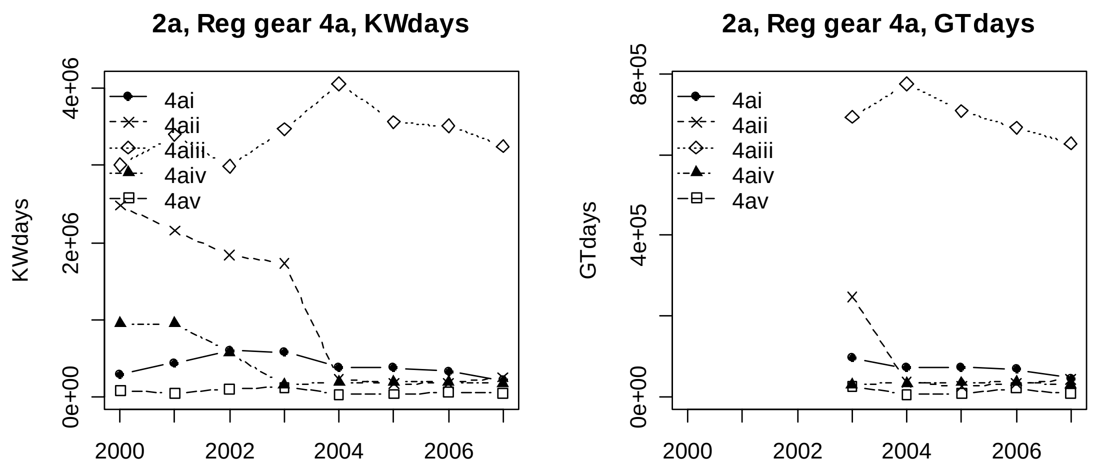


Figure 6.2.2.3. Kattegat: Trend in nominal effort for demersal trawl by mesh size range, 2000-2007. Left: kW*days, right: GT*days. 4ai=16-31 mm, 4aii=70-89 mm, 4aiii = 90-99 mm, 4aiv = 100-119 mm, 4av = 120+ mm.

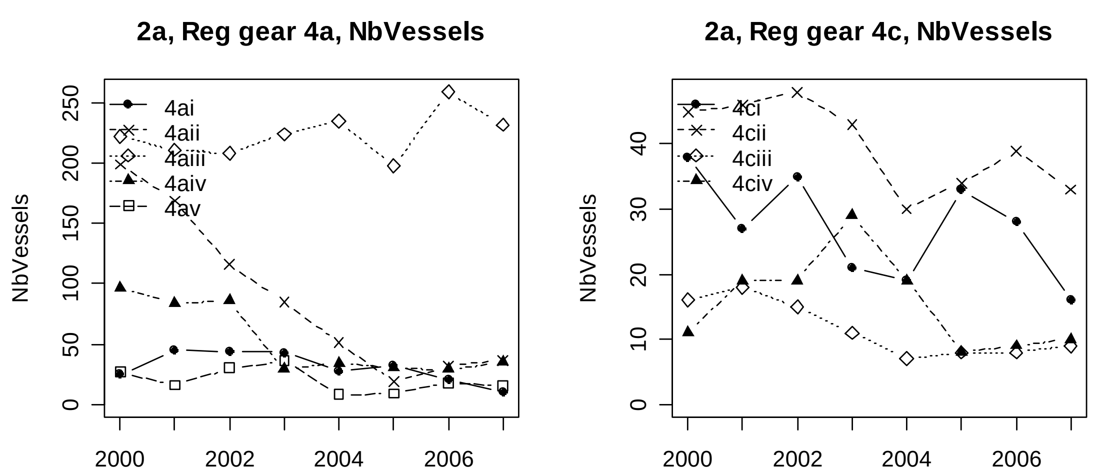


Figure 6.2.2.4. Kattegat: Trend in maximum number of vessels by mesh size range, 2000-2006. Left: demersal trawl, right: gillnet.

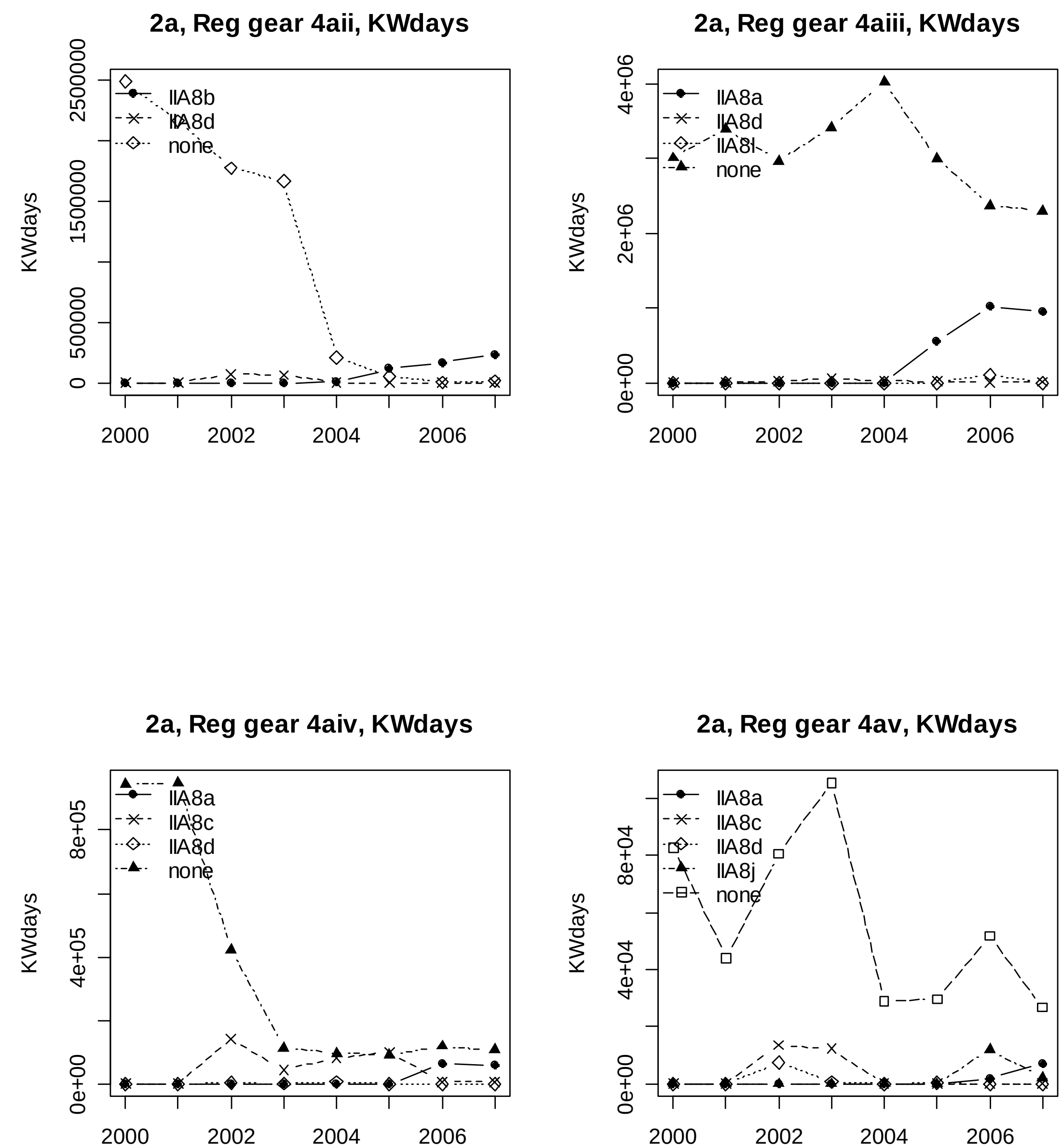


Figure 6.2.2.5. Kattegat:Trend in nominal effort for demersal trawl by mesh size range and derogation in the demersal trawl fishery (4a), 2000-2007. IIA81a =120 mm escape window, IIA81b = “Swedish grid”, IIA81c = <5% cod in 2002 catch record, IIA81d = <5% cod, sole and plaice in 2002 catch record, IIA81l = 95 mm escape window.

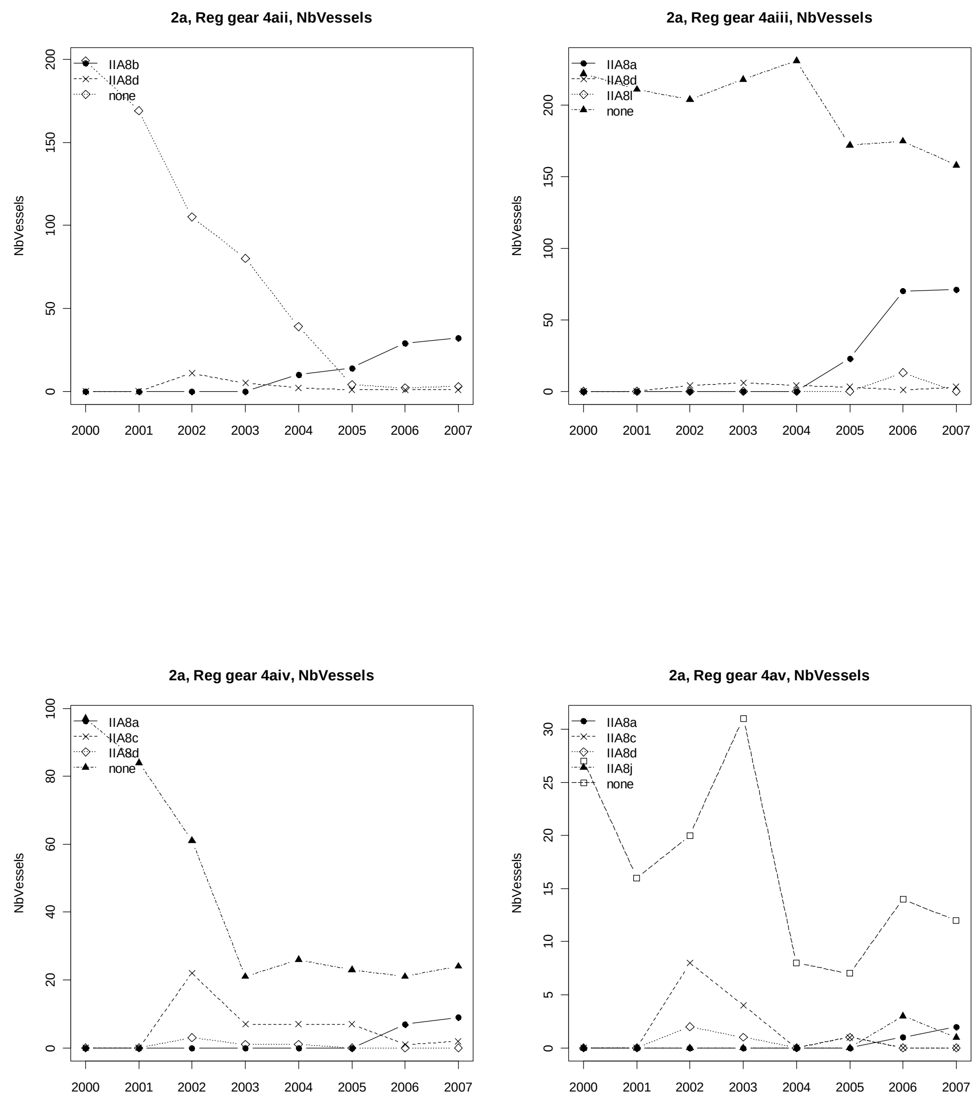


Figure 6.2.2.6. Kattegat: Trend in maximum number of vessels by mesh size range and derogation in the demersal trawl fishery (4a), 2000-2007.

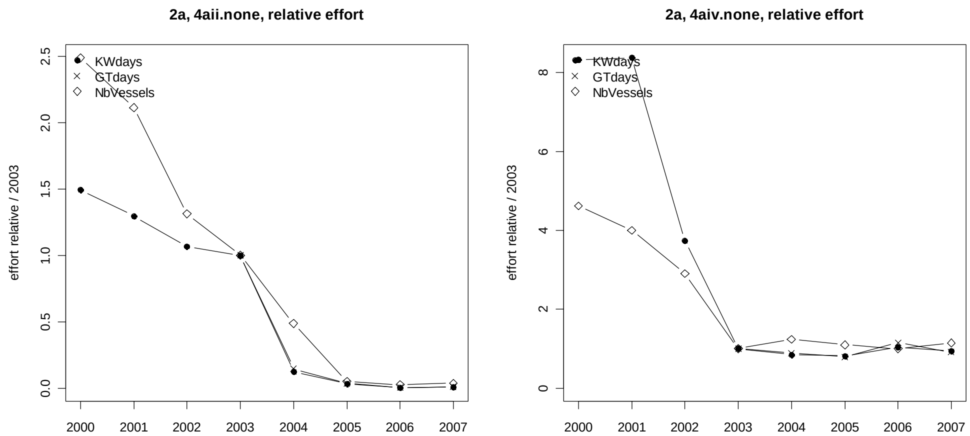


Figure 6.2.2.7. Trends in relative effort expressed in KW*days, GT*days and number of vessels for the main demersal trawl categories in Kattegat. Effort is measured relative to its value in 2003.

6.2.3. Trend in effort by derogation in management area 2b: Skagerrak, North Sea (incl. 2EU), and Eastern Channel

Catch and effort data including special conditions have been provided by all Member States with significant fishing activity in this area. As such, the data should represent a complete account of fishing effort by regulated gears in the area. In this report, additional analysis is included at the end of this section describing Skagerrak effort trends separately from the wider area.

Trends in nominal effort by regulated gears in the Skagerrak, North Sea (incl. 2EU) and the Eastern Channel are listed in Tables 6.2.3.1–6.2.3.3 and illustrated in Figures 6.2.3.1–6.2.3.14. For clarity, graphs of effort data are presented as aggregate totals for the whole of area 2b. In some cases regulations differ between different parts of the area, e.g. between 2b2 (ICES area IV, the North Sea) and 2b3 (ICES Division VIId, the Eastern Channel). Full data on effort by regulated gear, special condition and subsections of area 2b are given in Tables 6.2.3.1-6.2.3.3. For similar reasons, only figures for nominal effort in kW*days are plotted. Figures for GT*days and maximum number of vessels are available in the relevant tables.

The effort graphs shown are as follows:

- Figure 6.2.3.1; Effort totals by all regulated gear types.
- Figures 6.2.3.2–6.2.3.6; Effort totals by mesh size category with main gear types.
- Figures 6.2.3.7-6.2.3.14; Effort totals for individual gear categories where different special conditions apply showing the breakdown of effort by special condition.

Trends in nominal effort in kilowatt-days by overall gear category are given in Figure 6.2.3.1. This figure includes a ‘none’ category which covers nominal effort by unregulated gears, and regulated gears for which no mesh size information was available. The main gears in management area 2b are demersal trawls/seines and beam trawls. Nominal effort by both of these gear types has shown a decrease since at least 2002, and this is reflected in the decrease in total effort over the same period. This general decrease in effort has continued into 2007.

Figure 6.2.3.2 shows trends in nominal effort (kW*days) by demersal trawls and seines by regulated mesh size category. The overall effort by these gears has shown a reduction since 2002. However, there have also been substantial changes in the usage of the different mesh size categories. In particular there has been a sharp reduction in usage of gears with a mesh size of between 100mm and 119mm, whereas usage of gears with a mesh size of 120mm and above has increased. There has also been a general increase in effort by vessels using mesh sizes of 70-89mm and 90-99mm.

It is difficult to interpret the available special condition information with regard to the usage of the different mesh size categories by regulated gears. This is because there are a number of problems in the information supplied. Some nations were not able to provide this information for earlier years, and the information supplied by other nations reflects only eligibility for the various special conditions in 2002 and not uptake of these conditions. Nominal effort by special condition is given for each mesh size category of the regulated trawl gears in Figure 6.2.3.7–6.2.3.10. For most mesh sizes only a small proportion of the effort falls into the special condition categories, with the effort by vessels in the ‘no special condition’ category closely following the overall trend, except in 2005-2006, when the picture is complicated by some countries only reporting information for these years. The exception is effort by regulated gear 4aii (demersal trawls & seines with mesh sizes of 70-89mm; Figure 6.2.3.7). In this case, an increasing proportion of the effort is associated with special condition IIA81d. This special condition refers to vessels catching no more than 5% of cod, plaice or sole in 2002. The increase in effort in this category is due largely to French and Scottish vessels, so presumably reflects respectively the whiting and Nephrops fisheries.

The beam trawl derogations represent the second main gear category. Not all of the data for the major Dutch and Belgian fleets could be assigned to mesh size, though based on expert knowledge the large majority of this effort has been assigned to the 80-89mm mesh size category (regulated gear 4bi). Beam trawlers contributed around 40% to the overall nominal effort exerted in the Skagerrak, North Sea (incl. 2EU) and Eastern Channel. The data indicate a general reduction in beam trawl effort since at least 2002.

Static gears recently contribute only about 4-5% to the nominal effort deployed in the Skagerrak, North Sea (incl. 2EU) and Eastern Channel. STECF-SGRST notes that the fishing activities for static gears are poorly quantified by nominal effort (kW*days at sea). The mesh size categories used for gillnets were revised in 2007, through sub-dividing the former 110-219mm category into 110-149mm (now known as 4cii) and 150-219mm (now 4ciii). The largest mesh size category (4civ, ≥220mm) is the least used, but in recent years the amount of effort by each of the smaller mesh size categories has been broadly similar. There is some usage of longlines and trammel nets in the area, but overall these gears are not important.

Table 6.2.3.1. North Sea (incl. 2EU), and Eastern Channel: Trend in nominal effort (kW*days at sea) by derogation 2000-2007. Note, figures for 2000 and 2001 are under-estimates for some gears due to the absence of Dutch data for these years (see Section 5).

ANNEX	REG AREA	REG GEAR	SPECON	2000	2001	2002	2003	2004	2005	2006	2007	rel. to 2002
IIa	2b	4ai	none	3812603	2877073	2575730	2437307	2104885	1470061	1056603	921374	-0.64
IIa	2b	4aii	IIA81b					308459	542008	664972	894575	
IIa	2b	4aii	IIA81d	5700170	9004825	9654859	12643803	13071843	12617409	12522008	9966969	0.03
IIa	2b	4aiv	IIA81c	1013002	946008	2250797	964221	1053267	853868	767150	606884	-0.73
IIa	2b	4aiv	IIA81d	9250429	7187864	6394268	4498631	3369923	3218505	3174197	3400921	-0.47
IIa	2b	4aiv	IIA81k	34575	17845	13973	6894			515		-1.00
IIa	2b	4aiv	none	49524323	47150084	19041958	2285614	1529732	2253285	3144453	3112869	-0.84
IIa	2b	4av	IIA81c	6208	402	338510	247570	176570	241869	53271	77098	-0.77
IIa	2b	4av	IIA81d	82524	43748	1220254	1430239	1342001	1418275	1377251	1006320	-0.18
IIa	2b	4av	IIA81h							312979	471423	
IIa	2b	4av	none	2246550	1671285	22363363	26959264	22004271	22527392	19214457	16962371	-0.24
IIa	2b	4ci	none	899809	840708	726736	623288	665239	771883	680129	486840	-0.33
IIa	2b	4cii	none	1274055	1488623	1378804	1372380	951481	1031202	1056953	766286	-0.44
IIa	2b	4ciii	none	2247319	2119049	2047906	1375232	1036135	935620	828381	404543	-0.80
IIa	2b	4civ	none	712918	580270	428545	351901	379331	338835	363576	167008	-0.61
IIa	2b	4d	none	808389	524991	169090	126142	151882	260875	232425	176925	0.05
IIa	2b	4e	none	551810	397803	583631	292997	231262	250133	248272	273202	-0.53
IIa	2b	none	IIA81c	1115			3222		2936		4434	
IIa	2b	none	IIA81d	1680							5801	
IIa	2b	none	none	46029654	47155173	95330807	99248085	108367399	93146426	77664842	71075997	-0.25
IIa	2b1	4aii	none	3431661	2640771	2474111	1658209	412751	57234	11182	2900	-1.00
IIa	2b1	4aiii	IIA81a						666398	1670675	1199637	
IIa	2b1	4aiii	IIA81d			40162	77282	52071	106998	134788	50276	0.25
IIa	2b1	4aiii	IIA81l							128159		
IIa	2b1	4aiii	none	5063534	5130398	5836581	6317594	8026416	5649254	3692107	2830153	-0.52
IIa	2b1	4aiv	IIA81a							138793	116102	
IIa	2b1	4av	IIA81a							44708	10128	
IIa	2b1	4av	IIA81j							61319	79742	
IIa	2b1	none	none	518816	438556	941569	744185	482080	541646	334643	306134	-0.67
IIa	2b12	4bi	none	7201493	7109557	46802989	41906337	43017035	43999619	37082070	37542879	-0.20
IIa	2b12	4bii	none	23877	78217	107906	215759	215298	56053	84970	97864	-0.09
IIa	2b12	4biii	IIA81c	6248381	5653373	3234151	2802909	3242740	2781676	2030517	1392333	-0.57
IIa	2b12	4biii	IIA81i	1046788	1096794	199823	109831	72852	341616	256877	214230	0.07
IIa	2b12	4biii	none	4530016	4378008	1947178	2180401	1679094	1726246	1378409	603989	-0.69
IIa	2b12	4biv	IIA81c	237583	405586	3364625	3193376	2485604	2112150	1070319	310521	-0.91
IIa	2b12	4biv	IIA81e			34189	1760			272200		-1.00
IIa	2b12	4biv	IIA81i		16412	986530	371725	140026	161559	395155	73442	-0.93
IIa	2b12	4biv	none	1756348	1490353	2616018	2348755	2912862	2606373	3669488	2884541	0.10
IIa	2b12	4d	IIA81g	295720	355782	639609	378817	365066	416413	785992	762226	0.19
IIa	2b2	4aii	IIA81c	385339	411232	1711624	1761883	1331963	1154563	356284	294981	-0.83
IIa	2b2	4aii	none	4348647	4749611	7857506	9327894	8280640	8650894	8856835	7796626	-0.01
IIa	2b2	4civ	IIA81f			81918	59611	52335	25155	29147	32655	-0.60
IIa	2b2	none	IIA81c		3920	2800						-1.00
IIa	2b2	none	none	5465684	5432329	12773420	13821524	14130953	12248518	10043080	9323912	-0.27
IIa	2b23	4aiii	IIA81a							5352	41262	
IIa	2b23	4aiii	IIA81d	248886	458582	582675	671574	876607	557286	378024	429302	-0.26
IIa	2b23	4aiii	IIA81l							204687		
IIa	2b23	4aiii	none	712789	846450	1180862	3269924	3406304	2280351	2318167	3445355	1.92
IIa	2b23	4aiv	IIA81a							20556	1871	
IIa	2b23	4av	IIA81a							581044	190089	
IIa	2b23	4av	IIA81j							1354302	677660	
IIa	2b23	none	none	66313	110870	183312	213076	733436	2428888	3347906	3161260	16.25
IIa	2b3	4aii	IIA81c	72006	39957	34516	30199	42735	35214	24084	15282	-0.56
IIa	2b3	4aii	none	3583070	3895564	5906368	4533832	4411108	5219848	5340490	5705550	-0.03
IIa	2b3	4bi	none	1815750	2207117	2606397	2591619	2231740	2078235	2758014	2957265	0.13
IIa	2b3	4bii	none	19983	105417	132198	45278	18207	38356	43665	16711	-0.87
IIa	2b3	4biii	IIA81c	19979	19684	3323	1564		1484		1870	-0.44
IIa	2b3	4biii	IIA81i		6057	2314	3477					-1.00
IIa	2b3	4biii	none	2243	6929							
IIa	2b3	4biv	IIA81c	688								
IIa	2b3	4civ	IIA81f					6789			770	
IIa	2b3	4d	IIA81g	34078	685106	1523200	1504248	1609251	1735544	1611179	1777857	0.17
IIa	2b3	none	none	459136	829865	841507	727350	951180	374602	150946	145501	-0.83
Sum				171785941	170608248	269168612	255736783	257930823	239932755	214028567	195274716	-0.27

Table 6.2.3.2 North Sea (incl. 2EU), and Eastern Channel:Trend in effort (GT*days at sea) by derogation 2003-2007.

ANNEX	REG AREA	REG GEAR	SPECON	2003	2004	2005	2006	2007	rel. to 2003
IIa	2b	4ai	none	1162354	977745	595502	434832	339881	-0.71
IIa	2b	4aii	IIA81b		41219	80671	98128	134478	
IIa	2b	4aii	IIA81d	2959654	3045445	2946342	2862024	2310204	-0.22
IIa	2b	4aiv	IIA81c	315150	322811	274349	275777	203606	-0.35
IIa	2b	4aiv	IIA81d	1760498	1374157	1272441	1264092	1368182	-0.22
IIa	2b	4aiv	IIA81k	889			113		-1.00
IIa	2b	4aiv	none	739386	475838	651489	1080154	1067015	0.44
IIa	2b	4av	IIA81c	54332	48281	75183	16830	27506	-0.49
IIa	2b	4av	IIA81d	603614	626415	694260	672925	501945	-0.17
IIa	2b	4av	IIA81h				135809	209067	
IIa	2b	4av	none	10881599	8906227	9218011	8017707	7007155	-0.36
IIa	2b	4ci	none	123352	156014	183008	178225	134819	0.09
IIa	2b	4cii	none	220880	158170	176276	181956	132008	-0.40
IIa	2b	4ciii	none	302862	244762	221193	198496	80011	-0.74
IIa	2b	4civ	none	151961	152084	145212	170138	61181	-0.60
IIa	2b	4d	none	9065	12043	21918	18521	15228	0.68
IIa	2b	4e	none	91386	57479	100370	74390	71135	-0.22
IIa	2b	none	IIA81c	637		1761		1452	1.28
IIa	2b	none	IIA81d					1968	
IIa	2b	none	none	39706008	44774718	39132057	31979395	30458990	-0.23
IIa	2b1	4aii	none	277662	79495	9226	2949	1019	-1.00
IIa	2b1	4aiii	IIA81a			148524	357654	262446	
IIa	2b1	4aiii	IIA81d	19167	11958	24278	30558	7571	-0.60
IIa	2b1	4aiii	IIA81l				31710		
IIa	2b1	4aiii	none	1454160	1945318	1272146	856360	680509	-0.53
IIa	2b1	4aiv	IIA81a				46517	35786	
IIa	2b1	4av	IIA81a				13619	4191	
IIa	2b1	4av	IIA81j				21397	29319	
IIa	2b1	none	none	246484	176380	189129	119672	99423	-0.60
IIa	2b12	4bi	none	12026602	12660293	13084556	11190242	11381459	-0.05
IIa	2b12	4bii	none	54701	69007	17797	28078	26110	-0.52
IIa	2b12	4biii	IIA81c	725919	858396	738460	561357	394833	-0.46
IIa	2b12	4biii	IIA81i	30281	19163	113067	85896	70197	1.32
IIa	2b12	4biii	none	593121	479216	496142	404698	197924	-0.67
IIa	2b12	4biv	IIA81c	926862	728145	643014	298605	82109	-0.91
IIa	2b12	4biv	IIA81e	1336			92667		-1.00
IIa	2b12	4biv	IIA81i	102880	37283	49176	115017	23525	-0.77
IIa	2b12	4biv	none	762493	934312	873714	1271828	1007056	0.32
IIa	2b12	4d	IIA81g	32259	28328	36142	64204	64545	1.00
IIa	2b2	4aii	IIA81c	568281	427889	367352	119436	134647	-0.76
IIa	2b2	4aii	none	3110040	2812049	3074061	3108531	2750899	-0.12
IIa	2b2	4civ	IIA81f	20990	16735	8926	9717	11527	-0.45
IIa	2b2	none	none	9527122	10219555	9236185	7320077	6806289	-0.29
IIa	2b23	4aiii	IIA81a				2634	11721	
IIa	2b23	4aiii	IIA81d	136156	183739	119722	101584	128981	-0.05
IIa	2b23	4aiii	IIA81l				62288		
IIa	2b23	4aiii	none	1107605	1191720	812802	848813	1122902	0.01
IIa	2b23	4aiv	IIA81a				8816	385	
IIa	2b23	4av	IIA81a				217179	67922	
IIa	2b23	4av	IIA81j				497799	254782	
IIa	2b23	none	none	30543	104622	336296	462137	443247	13.51
IIa	2b3	4aii	IIA81c	4605	7687	6428	5055	2616	-0.43
IIa	2b3	4aii	none	803279	807451	970557	1042781	1133887	0.41
IIa	2b3	4bi	none	1009381	846360	766778	995593	1089957	0.08
IIa	2b3	4bii	none	6815	2109	4491	5584	2171	-0.68
IIa	2b3	4biii	IIA81c	425		598		320	-0.25
IIa	2b3	4biii	IIA81i	1558					-1.00
IIa	2b3	4civ	IIA81f		876			63	
IIa	2b3	4d	IIA81g	119892	135507	150175	137254	146533	0.22
IIa	2b3	none	none	101746	134842	54646	19343	16563	-0.84
Sum				92885992	96291843	89394431	78217161	72619265	-0.22

Table 6.2.3.3 North Sea (incl. 2EU), and Eastern Channel:Trend in effort (number of vessels, sum over maximum number of national vessels) by derogation 2000-2007. Note, figures for 2000 and 2001 are under-estimates for some gears due to the absence of Dutch data for these years (See Section 5).

ANNEX	REG AREA	REG GEAR	SPECON	2000	2001	2002	2003	2004	2005	2006	2007	rel. to 2002
IIa	2b	4ai	none	97	84	67	68	73	61	52	58	-0.13
IIa	2b	4aii	IIA81b					42	48	61	75	
IIa	2b	4aii	IIA81d	158	150	201	205	202	198	206	209	0.04
IIa	2b	4aiv	IIA81c	39	36	80	43	27	25	21	14	-0.83
IIa	2b	4aiv	IIA81d	87	86	90	42	24	21	25	21	-0.77
IIa	2b	4aiv	IIA81k	3	2	2	3			1		-1.00
IIa	2b	4aiv	none	575	569	400	150	109	112	104	105	-0.74
IIa	2b	4av	IIA81c	1	1	28	22	17	13	6	3	-0.89
IIa	2b	4av	IIA81d	3	5	49	32	27	21	21	16	-0.67
IIa	2b	4av	IIA81h							5	9	
IIa	2b	4av	none	62	50	342	361	283	252	239	207	-0.39
IIa	2b	4ci	none	124	119	106	97	73	82	67	62	-0.42
IIa	2b	4cii	none	117	142	138	129	121	153	159	129	-0.07
IIa	2b	4ciii	none	152	149	134	104	136	147	151	99	-0.26
IIa	2b	4civ	none	37	36	26	28	29	24	24	29	0.12
IIa	2b	4d	none	50	57	17	10	20	30	33	32	0.88
IIa	2b	4e	none	44	51	49	36	37	38	28	38	-0.22
IIa	2b	none	IIA81c	1			1		2		1	
IIa	2b	none	IIA81d	1							2	
IIa	2b	none	none	683	754	909	974	1,054	1,000	955	913	0.00
IIa	2b1	4aii	none	273	195	161	110	81	3	3	1	-0.99
IIa	2b1	4aiii	IIA81a						18	68	77	
IIa	2b1	4aiii	IIA81d			6	4	6	5	4	3	-0.50
IIa	2b1	4aiii	IIA81l							12		
IIa	2b1	4aiii	none	237	215	246	212	243	182	165	120	-0.51
IIa	2b1	4aiv	IIA81a							11	8	
IIa	2b1	4av	IIA81a							6	9	
IIa	2b1	4av	IIA81j							4	5	
IIa	2b1	none	none	38	40	42	42	50	49	43	28	-0.33
IIa	2b12	4bi	none	190	179	342	394	384	381	349	309	-0.10
IIa	2b12	4bii	none	3	3	9	15	16	9	12	12	0.33
IIa	2b12	4biii	IIA81c	42	37	29	20	25	21	17	15	-0.48
IIa	2b12	4biii	IIA81i	7	8	4	5	2	3	3	2	-0.50
IIa	2b12	4biii	none	43	45	42	50	35	36	37	21	-0.50
IIa	2b12	4biv	IIA81c	3	2	30	23	20	19	14	8	-0.73
IIa	2b12	4biv	IIA81e			3	1			3		-1.00
IIa	2b12	4biv	IIA81i		1	6	4	3	2	3	2	-0.67
IIa	2b12	4biv	none	34	40	50	52	74	66	77	77	0.54
IIa	2b12	4d	IIA81g	10	17	33	31	30	38	43	41	0.24
IIa	2b2	4aii	IIA81c	25	26	78	69	54	43	25	20	-0.74
IIa	2b2	4aii	none	177	165	190	232	202	191	205	185	-0.03
IIa	2b2	4civ	IIA81f			18	8	10	6	6	7	-0.61
IIa	2b2	none	IIA81c		1	1						-1.00
IIa	2b2	none	none	52	64	86	94	96	90	83	89	0.03
IIa	2b23	4aiii	IIA81a							2	1	
IIa	2b23	4aiii	IIA81d	18	13	20	20	20	17	18	24	0.20
IIa	2b23	4aiii	IIA81l							6		
IIa	2b23	4aiii	none	43	51	63	135	135	109	132	123	0.95
IIa	2b23	4aiv	IIA81a							4	1	
IIa	2b23	4av	IIA81a							9	8	
IIa	2b23	4av	IIA81j							16	9	
IIa	2b23	none	none	13	12	22	33	92	164	181	182	7.27
IIa	2b3	4aii	IIA81c	11	9	8	5	4	4	3	2	-0.75
IIa	2b3	4aii	none	76	80	96	103	103	133	151	150	0.56
IIa	2b3	4bi	none	100	94	94	99	107	97	107	101	0.07
IIa	2b3	4bii	none	3	4	8	6	3	3	4	3	-0.63
IIa	2b3	4biii	IIA81c	3	2	1	1		1		1	0.00
IIa	2b3	4biii	IIA81i		1	1	1					-1.00
IIa	2b3	4biii	none	2	1							
IIa	2b3	4biv	IIA81c	1								
IIa	2b3	4civ	IIA81f					2			1	
IIa	2b3	4d	IIA81g	5	46	69	74	60	76	73	83	0.20
IIa	2b3	none	none	34	54	55	68	69	44	14	11	-0.80

Figure 6.2.3.1. Area 2b (Skagerrak, North Sea & Eastern Channel), total effort by regulated gears.

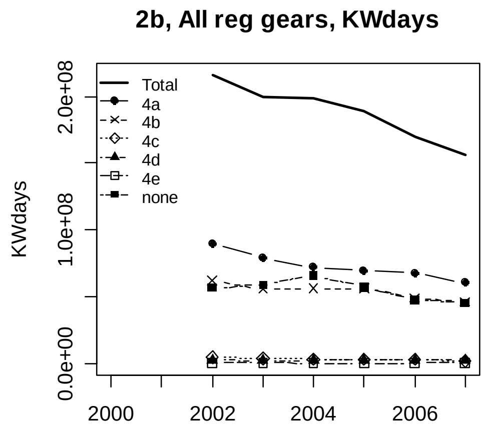
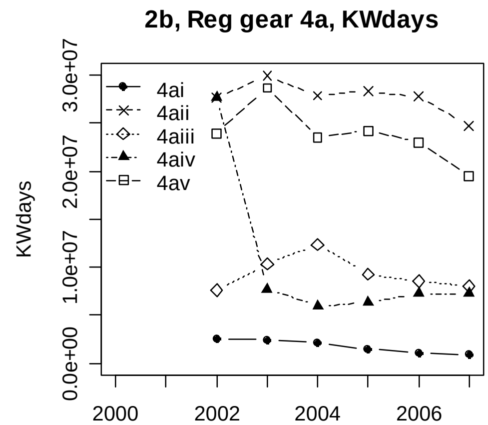


Figure 6.2.3.2. Area 2b (Skagerrak, North Sea & Eastern Channel), effort by regulated trawl gears.



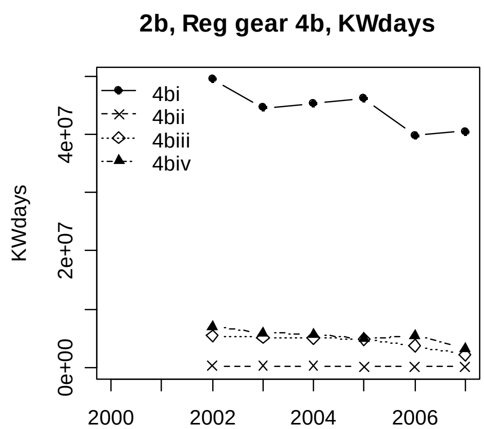


Figure 6.2.3.3. Area 2b (Skagerrak, North Sea & Eastern Channel), effort by regulated beam trawls.

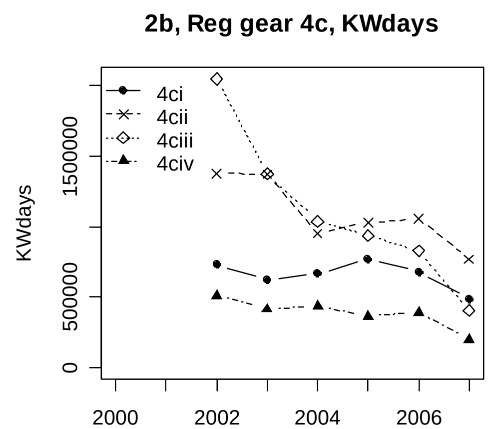


Figure 6.2.3.4. Area 2b (Skagerrak, North Sea & Eastern Channel), effort by regulated gillnetters.

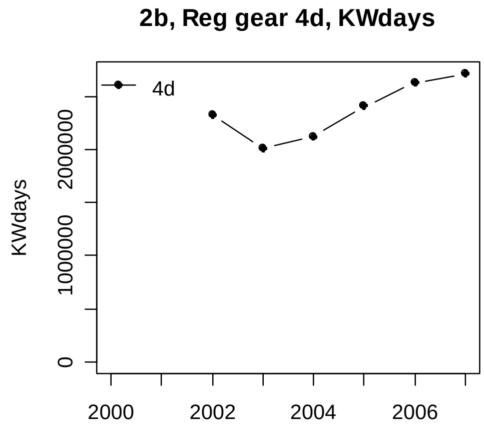


Figure 6.2.3.5. Area 2b (Skagerrak, North Sea & Eastern Channel), effort by regulated trammel netters.

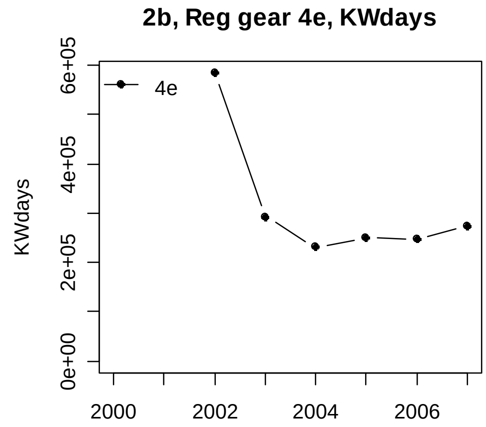


Figure 6.2.3.6. Area 2b (Skagerrak, North Sea & Eastern Channel), effort by regulated longliners.

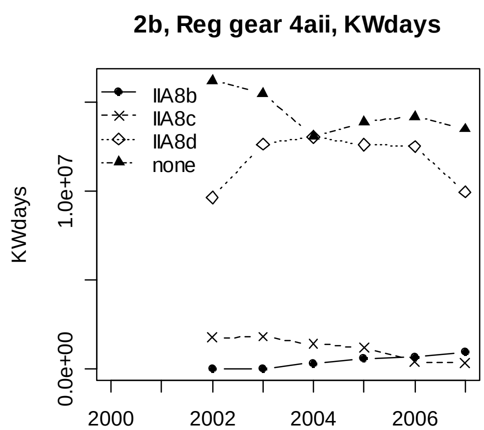


Figure 6.2.3.7. Area 2b (Skagerrak, North Sea & Eastern Channel), effort by regulated gear 4aii showing breakdown by special condition.

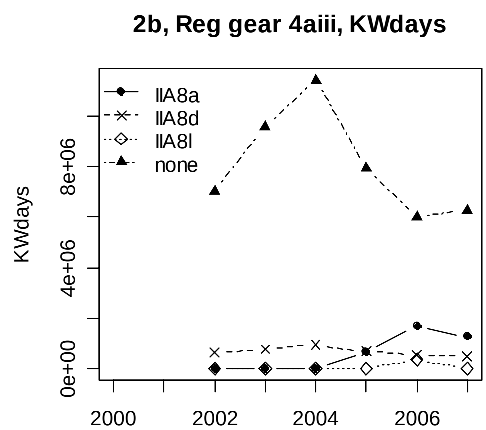


Figure 6.2.3.8. Area 2b (Skagerrak, North Sea & Eastern Channel), effort by regulated gear 4aiii showing breakdown by special condition.

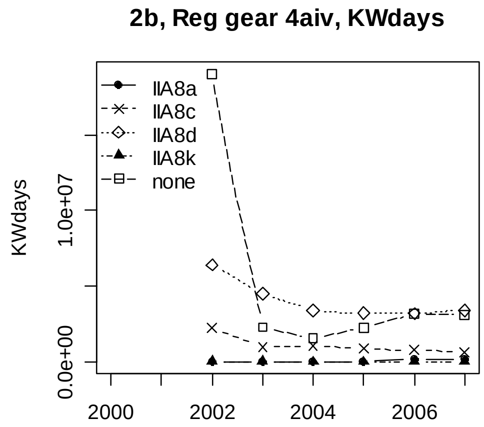


Figure 6.2.3.9. Area 2b (Skagerrak, North Sea & Eastern Channel), effort by regulated gear 4aiv showing breakdown by special condition.

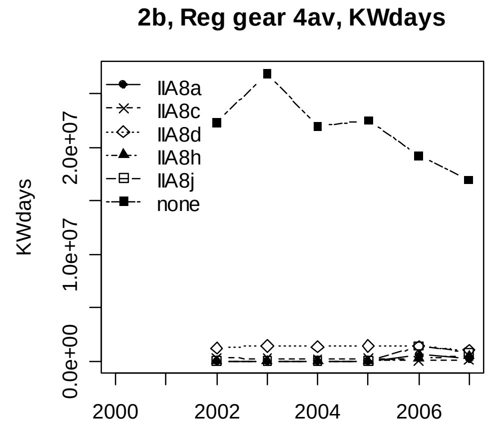


Figure 6.2.3.10. Area 2b (Skagerrak, North Sea & Eastern Channel), effort by regulated gear 4av showing breakdown by special condition.

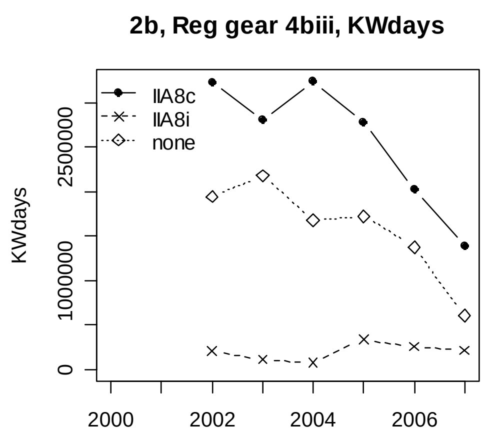


Figure 6.2.3.11. Area 2b (Skagerrak, North Sea & Eastern Channel), effort by regulated gear 4biii showing breakdown by special condition.

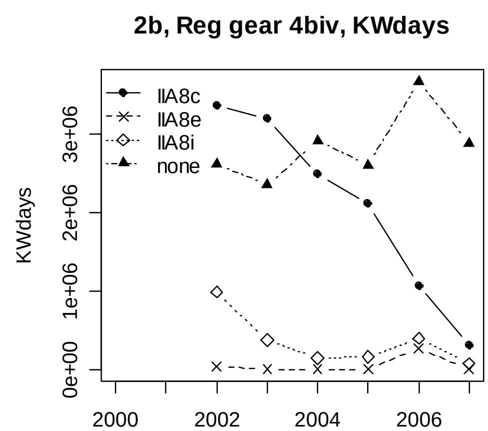


Figure 6.2.3.12. Area 2b (Skagerrak, North Sea & Eastern Channel), effort by regulated gear 4biv showing breakdown by special condition.

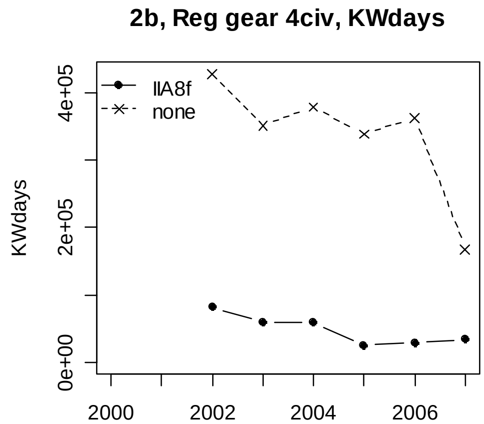


Figure 6.2.3.13. Area 2b (Skagerrak, North Sea & Eastern Channel), effort by regulated gear 4civ showing breakdown by special condition.

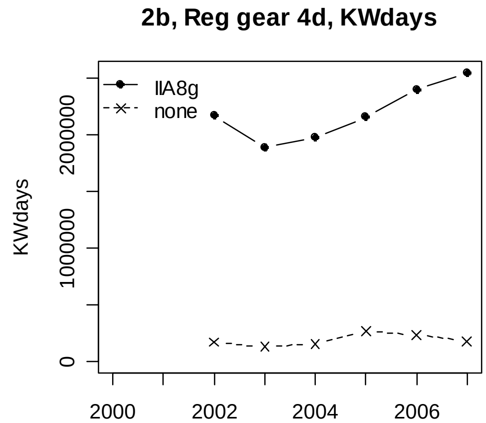


Figure 6.2.3.14. Area 2b (Skagerrak, North Sea & Eastern Channel), effort by regulated gear 4d showing breakdown by special condition.

Skagerrak detail

This subsection presents and analyses effort trend data for area 2b1 (Skagerrak) separately. The reasons for analysing the Skagerrak data separate from the larger 2b area are differences in the annex IIa effort regime (see Table 6.1.1), technical regulations (minimum mesh size, catch composition regulations-see council reg. 40/2008), stock boundaries and quotas and in fisheries in general. In addition, evaluation of effort trend data for the small Skagerrak area is difficult when data is pooled with data from the large area comprising also the North Sea and Eastern channel.

Effort data including special conditions have been provided by all Member States with fishing activity in the Skagerrak (BEL, GER, DEN, NED, SCO, SWE). The Skagerrak fisheries are however strongly dominated by Denmark and Sweden. These two countries accounts for over 97% of the total effort. The data should therefore represent a complete account of fishing effort by regulated gears in the area.

Trends in nominal effort by regulated gears in the Skagerrak are listed in Tables 6.2.3.a.1–6.2.3.a.3 and illustrated in Figures 6.2.3.a.1–6.2.3.12. Full data on effort by regulated gear, special condition and subsections of area 2b1 are given in Tables 6.2.3.a.1-6.2.3.a.3.

Trends in nominal effort by overall gear category are given in Figure 6.2.3.a.1-6.2.3.a.3. These graphs include a ‘none’ category which covers nominal effort by unspecified gears for which no mesh size information was available.

Total nominal effort (kW*days) in the Skagerrak decreased by 45% between the years 2002 and 2007. The dominating gear category in management area 2b1 is demersal trawls/seines, which represents over 85% of total nominal effort (kW*days and GT*days). Nominal effort by trawls/seines has shown a decrease since 2002, and this is reflected in the decrease in total effort over the same period. This general decrease in effort has continued into 2007 (Tables 6.2.3.a.1–6.2.3.a.3).

Figure 6.2.3.a.4-6.2.3.a.6 shows trends in effort by demersal trawls and seines by regulated mesh size category. The overall effort by these gears has shown a reduction since 2002. However, there have also been changes in the usage of the different mesh size categories. In particular there has been a major shift occurred between 2003 and 2004 when the use of 70-89mm (*Nephrops*) trawls without sorting grids was banned. This resulted in an increase in the 90-99mm trawl fishery in 2004, which has thus decreased subsequently in 2005-2007. The 90-99mm trawl/seine category recently (2005-2007) contributed to 60-70% of total nominal trawl effort and is therefore clearly the single most important gear used in the Skagerrak. Over the period there has also been a reduction in usage of gears with a mesh size of between 100mm and 119mm due to a lower number of allowed days at sea in comparison to smaller meshed trawls, whereas usage of gears with a mesh size of 120mm and above has increased from low levels. The main reason for the limited use of >100mm trawls in the Skagerrak when compared to the North Sea is that there are no incentives in the catch composition regulations in the Skagerrak (and the Kattegat) to use larger mesh sizes. This is because there are no rules on the required catch composition in >90mm trawls, whereas in the North Sea this applies to >120mm trawls. The consequence is that the dominating trawl gear category used in the Skagerrak is 90-99mm trawls and seines (4aiii), which are used in a mixed *Nephrops*/fish fishery although individual vessels and trips often target either fish or *Nephrops*.

It is difficult to interpret the available special condition information with regard to the usage of the different mesh size categories by regulated gears over time. This is because not all nations were able to provide this information for all relevant years. The information was however judged correct for the years 2005-2007. Nominal effort by special condition is given for each mesh size category of the regulated trawl gears in Figure 6.2.3.a.7–6.2.3.a.10. For most mesh sizes only a small proportion of the effort falls into the special condition categories (81a, 81c, 81d, 81h, 81j and 81l), with the effort by vessels in the ‘no special condition’ category closely following the overall trend. There are however two exceptions in uptake of special conditions. The first exception is that all exerted effort in gear category 4aii (70-89mm trawls and seines) is since 2005 associated with special condition IIA81b (Figure 6.2.3.a.7). This special condition refers to vessels using a *Nephrops* sorting grid and full square mesh cod-end in 70-89mm trawls. The increase in effort for this special condition is due to uptake by Swedish vessels only. The other example of significant uptake of a special condition is IIA81a in gear category 4aiii (90-99mm trawls and seines). This special condition refers to vessels using a 120mm square mesh window 6-9m above the codline. Uptake is significant (app. 30% of total 4aiii effort) both for Danish and Swedish vessels in a mixed fishery for *Nephrops*/fish in the Skagerrak (Figure 6.2.3.a.8).

Beam trawls are a marginal effort category in the Skagerrak. Beam trawl derogations (4b) only represent a small proportion of regulated effort in area 2b1 (3-6% of total annual effort). The data indicate a general reduction in beam trawl effort since 2000.

Static gears recently contribute only about 5-8% to the nominal effort deployed in the Skagerrak. STECF-SGRST notes that the fishing activities for static gears are poorly quantified by nominal effort (kW*days at sea). If the number of vessels is used as a proxy for effort, the importance of static vessels is considerably larger (32-34% of total Skagerrak effort for 2005-07). Data on nominal gill net effort indicate a general reduction since 2000 (Figure 6.2.3.a.10-6.2.3.a.12). The effort reduction is more pronounced in terms of kW or GT*days than in the number of vessels, which may indicate a reduced average vessel size. The dominating mesh size category is 4cii (110-150mm). The largest mesh size category (4civ, ≥220mm) is the least used. There is some usage of longlines and trammel nets in the area, but overall these gears are unimportant.

Table 6.2.3.a.1. Trend in nominal effort (kW*days at sea) by derogation in the Skagerrak (area 2b1), 2000-2007.

ANNEX	REG AREA	GEAR	SPECON	2000	2001	2002	2003	2004	2005	2006	2007	Rel change to 2002
IIa	2b1	4a	none	8952	3000	0	0	0	270	0	0	
IIa	2b1	4ai	none	421389	510961	381158	377919	387803	382823	270204	239157	-0,37
IIa	2b1	4aii	IIA81a	0	0	0	0	0	0	437	0	
IIa	2b1	4aii	IIa81b	0	0	0	0	308459	542008	664972	894575	
IIa	2b1	4aii	IIA81d	0	0	285013	138894	23214	1499	268	0	-1,00
IIa	2b1	4aii	none	3431661	2640771	2474111	1658209	412751	57234	11182	2900	-1,00
IIa	2b1	4aiii	IIA81a	0	0	0	0	0	666398	1670675	1199637	
IIa	2b1	4aiii	IIA81d	0	0	40162	77282	52071	106998	134788	50276	0,25
IIa	2b1	4aiii	IIA81h	0	0	0	0	0	0	0	880	
IIa	2b1	4aiii	IIA81j	0	0	0	0	0	0	0	2104	
IIa	2b1	4aiii	IIa81l	0	0	0	0	0	0	128159	0	
IIa	2b1	4aiii	none	5063534	5130398	5836581	6314438	8026416	5649254	3692107	2830153	-0,52
IIa	2b1	4aiv	IIA81a	0	0	0	0	0	0	138793	116102	
IIa	2b1	4aiv	IIA81c	0	0	187053	13494	35488	74498	5952	26314	-0,86
IIa	2b1	4aiv	IIA81d	0	0	7322	861	10512	0	0	36780	4,02
IIa	2b1	4aiv	IIA81h	0	0	0	0	0	0	0	2750	
IIa	2b1	4aiv	IIa81l	0	0	0	0	0	0	734	0	
IIa	2b1	4aiv	none	2930989	3572239	2473517	309248	244560	608608	627553	411755	-0,83
IIa	2b1	4av	IIA81a	0	0	0	0	0	0	44708	10128	
IIa	2b1	4av	IIA81c	0	0	39450	900	13806	11390	0	0	-1,00
IIa	2b1	4av	IIA81d	0	0	28900	3200	49284	81288	56727	91786	2,18
IIa	2b1	4av	IIA81h	0	0	0	0	0	0	0	983	
IIa	2b1	4av	IIA81j	0	0	0	0	0	0	61319	79742	
IIa	2b1	4av	IIa81l	0	0	0	0	0	0	1250	0	
IIa	2b1	4av	none	108707	215617	634726	421007	361098	520359	598932	775674	0,22
IIa	2b1	4b	none	0	2515	0	0	0	0	0	0	
IIa	2b1	4bi	none	0	16173	0	39621	78405	49142	88752	60476	
IIa	2b1	4bii	none	0	0	26331	154081	30826	13448	3757	0	-1,00
IIa	2b1	4biii	IIA81c	19976	0	2301	0	660	0	0	0	-1,00
IIa	2b1	4biii	none	461634	1153058	408189	140841	92202	90268	47048	159043	-0,61
IIa	2b1	4biv	IIA81c	0	0	294	440	0	0	0	0	-1,00
IIa	2b1	4biv	IIA81e	0	0	0	0	0	0	25766	0	
IIa	2b1	4biv	none	14343	25582	58922	193707	514483	445508	49128	96617	0,64
IIa	2b1	4c	none	11965	12630	8606	10775	13128	9089	8109	12960	0,51
IIa	2b1	4ci	none	94364	101594	25296	8297	5723	15930	12185	12576	-0,50
IIa	2b1	4cii	none	511077	609238	586485	390861	342845	323098	355262	266650	-0,55
IIa	2b1	4ciii	none	278678	399923	301262	148873	96553	93172	89338	116089	-0,61
IIa	2b1	4civ	none	38209	27351	15588	17688	14014	7637	6540	14305	-0,08
IIa	2b1	4d	none	88	15081	574	88	2249	3880	9594	234	-0,59
IIa	2b1	4e	none	36365	74543	63601	48571	44965	42750	113476	156854	1,47
IIa	2b1	none	none				460	539			1395	
Sum				13431931	14510674	13885442	10469755	11162054	9796549	8917715	7668895	-0,45

Table 6.2.3.a.2. Trend in effort (GT*days at sea) by derogation in the Skagerrak (area 2b1), 2000-2007.

ANNEX	REG AREA	GEAR	SPECON	2000	2001	2002	2003	2004	2005	2006	2007	Rel change to 2002
IIa	2b1	4a	none	2891	846	0	0	0	36	0	0	
IIa	2b1	4ai	none	100894	114274	86056	82251	92152	96029	65145	58370	-0,32
IIa	2b1	4aii	IIA81a	0	0	0	0	0	0	73	0	
IIa	2b1	4aii	IIa81b	0	0	0	0	41219	80671	98128	134478	
IIa	2b1	4aii	IIA81d	0	0	90179	34388	7299	494	49	0	-1,00
IIa	2b1	4aii	none	590811	478955	424748	277662	79495	9226	2949	1019	-1,00
IIa	2b1	4aiii	IIA81a	0	0	0	0	0	148524	357654	262446	
IIa	2b1	4aiii	IIA81d	0	0	7494	19167	11958	24278	30558	7571	0,01
IIa	2b1	4aiii	IIA81h	0	0	0	0	0	0	0	228	
IIa	2b1	4aiii	IIA81j	0	0	0	0	0	0	0	900	
IIa	2b1	4aiii	IIa81l	0	0	0	0	0	0	31710	0	
IIa	2b1	4aiii	none	1052927	1055908	1165592	1454160	1945318	1272146	856360	680509	-0,42
IIa	2b1	4aiv	IIA81a	0	0	0	0	0	0	46517	35786	
IIa	2b1	4aiv	IIA81c	0	0	39249	2990	5621	11313	704	3866	-0,90
IIa	2b1	4aiv	IIA81d	0	0	1773	135	6787	0	0	20280	10,44
IIa	2b1	4aiv	IIA81h	0	0	0	0	0	0	0	279	
IIa	2b1	4aiv	IIa81l	0	0	0	0	0	0	202	0	
IIa	2b1	4aiv	none	752218	1047099	633217	77380	67524	179900	175455	104914	-0,83
IIa	2b1	4av	IIA81a	0	0	0	0	0	0	13619	4191	
IIa	2b1	4av	IIA81c	0	0	7576	183	5760	4390	0	0	-1,00
IIa	2b1	4av	IIA81d	0	0	7889	1224	21332	33990	23771	44017	4,58
IIa	2b1	4av	IIA81h	0	0	0	0	0	0	0	770	
IIa	2b1	4av	IIA81j	0	0	0	0	0	0	21397	29319	
IIa	2b1	4av	IIa81l	0	0	0	0	0	0	355	0	
IIa	2b1	4av	none	17734	44952	198694	154086	133836	188916	213578	277800	0,40
IIa	2b1	4bi	none	0	5357	0	12716	28426	20519	35513	24813	
IIa	2b1	4bii	none	0	0	8534	36623	12759	5113	2567	0	-1,00
IIa	2b1	4biii	IIA81c	4400	0	551	0	501	0	0	0	-1,00
IIa	2b1	4biii	none	142181	347358	126945	36721	24786	24427	15584	53507	-0,58
IIa	2b1	4biv	IIA81c	0	0	55	132	0	0	0	0	-1,00
IIa	2b1	4biv	IIA81e	0	0	800	0	0	0	8656	0	-1,00
IIa	2b1	4biv	none	6938	11748	19189	61111	143094	122418	18586	32346	0,69
IIa	2b1	4c	none	2667	2483	1406	1494	1384	653	801	1400	0,00
IIa	2b1	4ci	none	11944	16900	3269	728	501	1388	1468	1386	-0,58
IIa	2b1	4cii	none	70352	88297	81687	50176	41622	38755	41721	31528	-0,61
IIa	2b1	4ciii	none	34588	57540	47237	18385	11640	10448	9931	12350	-0,74
IIa	2b1	4civ	none	6178	4460	2102	1684	1287	637	525	1160	-0,45
IIa	2b1	4d	none	7	2215	63	726	188	439	1003	30	-0,52
IIa	2b1	4e	none	5043	12789	7753	8945	3971	3085	30845	49463	5,38
IIa	2b1	none	none				33	67			280	
Sum				2801773	3291181	2962058	2333100	2688527	2277795	2105424	1875006	-0,37

Table 6.2.3.a.3. Trend in effort (number of vessels, sum over maximum number of national vessels) by derogation in the Skagerrak (area 2b1), 2000-2007.

ANNEX	REG AREA	GEAR	SPECON	2000	2001	2002	2003	2004	2005	2006	2007	Rel change to 2002
IIa	2b1	4a	none	9	1	0	0	0	1	0	0	
IIa	2b1	4ai	none	81	129	112	79	47	64	37	27	-0,76
IIa	2b1	4aii	IIA81a	0	0	0	0	0	0	2	0	
IIa	2b1	4aii	IIa81b	0	0	0	0	108	175	196	263	
IIa	2b1	4aii	IIA81d	0	0	23	27	5	1	1	0	-1,00
IIa	2b1	4aii	none	986	828	756	604	218	19	9	3	-1,00
IIa	2b1	4aiii	IIA81a	0	0	0	0	0	151	302	401	
IIa	2b1	4aiii	IIA81d	0	0	11	13	16	17	17	11	0,00
IIa	2b1	4aiii	IIA81h	0	0	0	0	0	0	0	1	
IIa	2b1	4aiii	IIA81j	0	0	0	0	0	0	0	1	
IIa	2b1	4aiii	IIa81l	0	0	0	0	0	0	33	0	
IIa	2b1	4aiii	none	1023	1031	1074	1131	1238	815	741	509	-0,53
IIa	2b1	4aiv	IIA81a	0	0	0	0	0	0	43	33	
IIa	2b1	4aiv	IIA81c	0	0	70	15	15	29	2	8	-0,89
IIa	2b1	4aiv	IIA81d	0	0	9	2	2	0	0	3	-0,67
IIa	2b1	4aiv	IIA81h	0	0	0	0	0	0	0	2	
IIa	2b1	4aiv	IIa81l	0	0	0	0	0	0	1	0	
IIa	2b1	4aiv	none	607	681	440	127	124	187	217	188	-0,57
IIa	2b1	4av	IIA81a	0	0	0	0	0	0	18	11	
IIa	2b1	4av	IIA81c	0	0	28	3	8	6	0	0	-1,00
IIa	2b1	4av	IIA81d	0	0	13	2	9	9	10	14	0,08
IIa	2b1	4av	IIA81h	0	0	0	0	0	0	0	2	
IIa	2b1	4av	IIA81j	0	0	0	0	0	0	10	13	
IIa	2b1	4av	IIa81l	0	0	0	0	0	0	1	0	
IIa	2b1	4av	none	88	126	255	143	123	163	157	183	-0,28
IIa	2b1	4bi	none	0	1	0	8	18	12	19	12	
IIa	2b1	4bii	none	0	0	3	10	12	5	1	0	-1,00
IIa	2b1	4biii	IIA81c	2	0	2	0	1	0	0	0	-1,00
IIa	2b1	4biii	none	25	29	16	15	18	12	3	6	-0,63
IIa	2b1	4biv	IIA81c	0	0	1	1	0	0	0	0	-1,00
IIa	2b1	4biv	IIA81e	0	0	1	0	0	0	2	0	-1,00
IIa	2b1	4biv	none	2	5	6	34	63	43	10	6	0,00
IIa	2b1	4c	none	21	23	10	15	17	14	9	10	0,00
IIa	2b1	4ci	none	101	90	62	25	20	42	44	30	-0,52
IIa	2b1	4cii	none	459	569	497	497	412	526	556	421	-0,15
IIa	2b1	4ciii	none	227	299	225	214	168	187	178	208	-0,08
IIa	2b1	4civ	none	90	57	38	31	24	28	19	39	0,03
IIa	2b1	4d	none	1	11	3	1	2	12	18	2	-0,33
IIa	2b1	4e	none	58	97	49	51	32	53	65	73	0,49
IIa	2b1	none	none				1	4			1	
Sum				3780	3977	3704	3049	2704	2571	2721	2481	-0,33

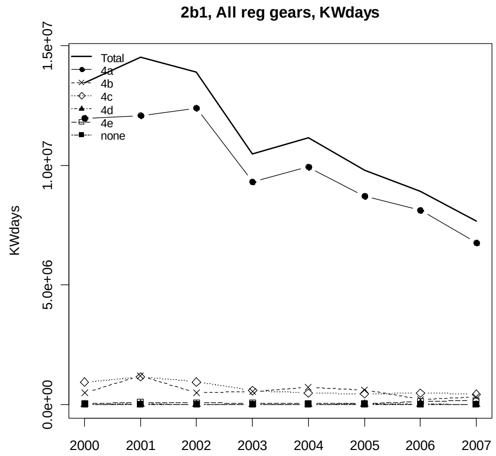


Figure 6.2.3.a.1. Area 2b1 (Skagerrak), total nominal effort (kW*days) by regulated gears.

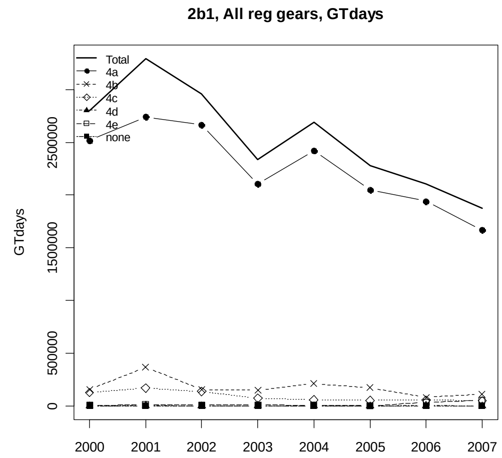


Figure 6.2.3.a.2. Area 2b1 (Skagerrak), effort (GT*days) by regulated gears.

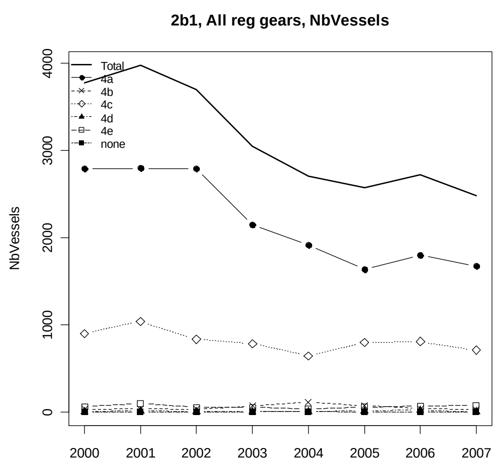


Figure 6.2.3.a.3. Area 2b1 (Skagerrak), effort trend in maximum number of vessels by regulated gears.

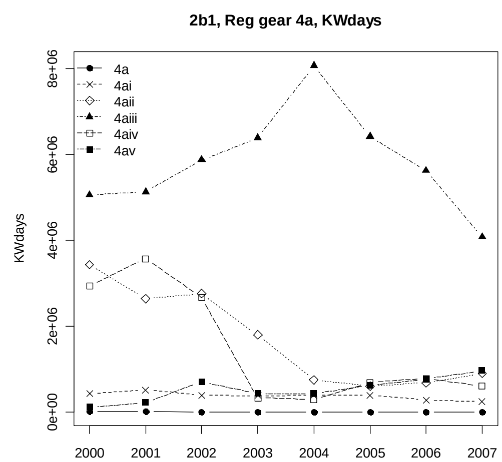


Figure 6.2.3.a.4. Area 2b1 (Skagerrak), nominal effort (kW*days) by regulated trawl/seine gears.

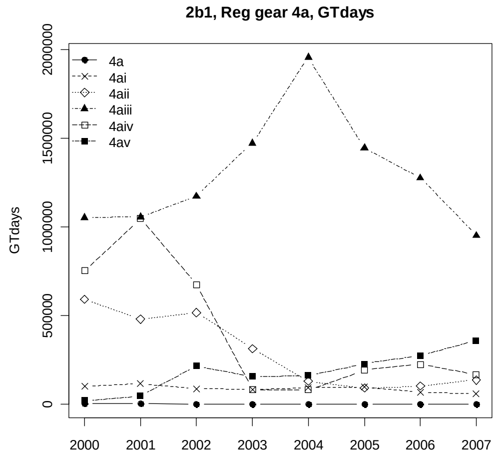


Figure 6.2.3.a.5. Area 2b1 (Skagerrak), effort (GT*days) by regulated trawl/seine gears.

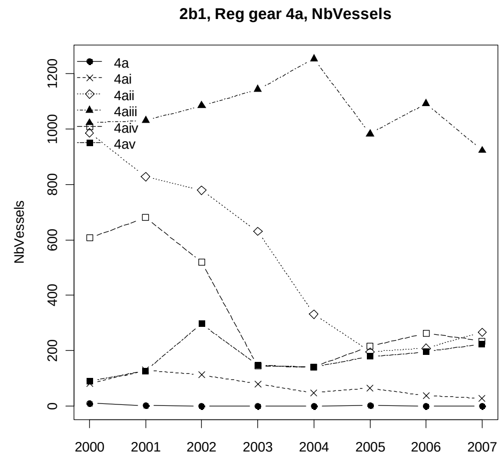


Figure 6.2.3.a.6. Area 2b1 (Skagerrak), effort trend in maximum number of vessels by regulated trawl/seine gears.

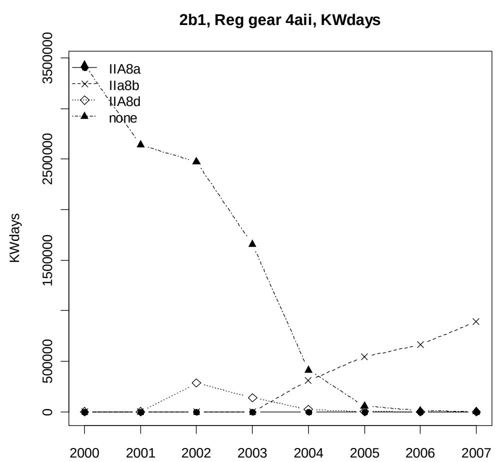


Figure 6.2.3.a.7. Area 2b1 (Skagerrak), effort by regulated gear 4aii showing breakdown by special condition.

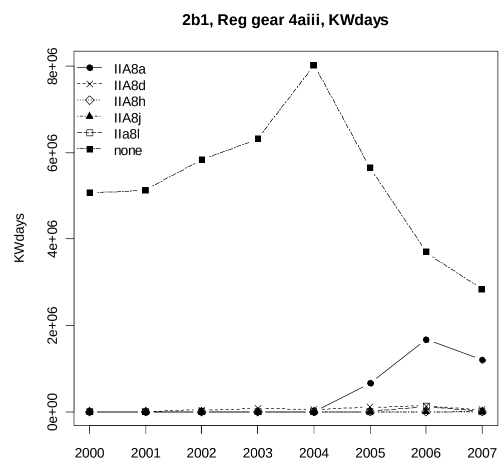


Figure 6.2.3.a.8. Area 2b1 (Skagerrak), effort by regulated gear 4aiii showing breakdown by special condition.

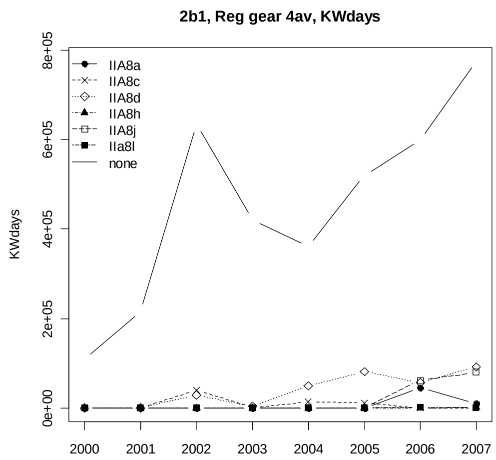


Figure 6.2.3.a.9. Area 2b1 (Skagerrak), effort by regulated gear 4av showing breakdown by special condition.

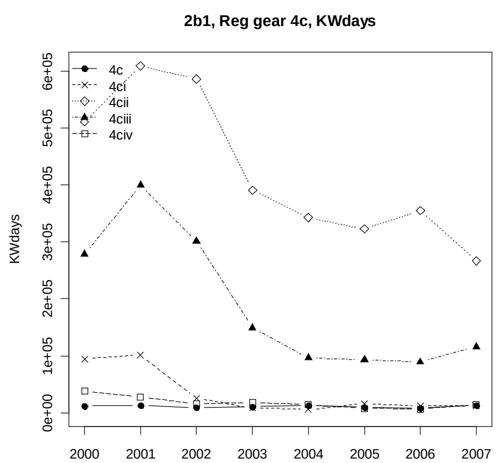


Figure 6.2.3.a.10. Area 2b1 (Skagerrak), nominal effort (kW*days) by regulated gillnetters.

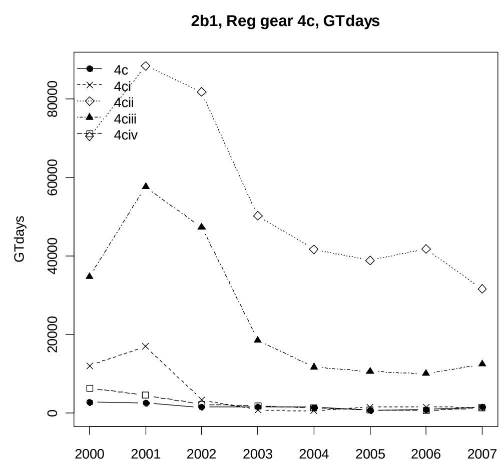


Figure 6.2.3.a.11. Area 2b1 (Skagerrak), nominal effort (GT*days) by regulated gillnetters.

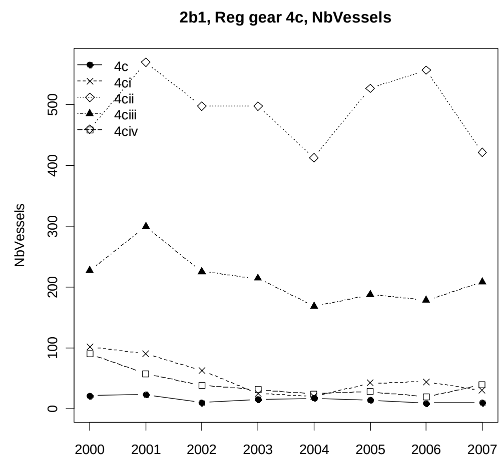


Figure 6.2.3.a.12. Area 2b1 (Skagerrak), effort trend in maximum number of vessels by regulated gillnetters.

6.2.4. Trend in effort by derogation in management area 2c: Irish Sea

In comparison with 2006 data submissions, overall nominal effort figures are relatively consistent, with reassignment of effort within gear categories to special conditions from the 'none' group.

Nominal effort (kW*days-at-sea) within the Irish Sea has decreased by 35% since 2000 (Table 6.2.4.1). The overall trend indicates historical effort was relatively stable until 2003, after which a decline occurs, 28% from 2003 to 2007 (Figure 6.2.4.1). Overall effort levels indicate a plateau in the last two years.

Unidentified effort (regulated gear 'none') is relatively high prior to 2003, accounting for approximately 50% of overall effort. A large proportion of this group was due to Irish effort reported without mesh size information. This is reflected by a decrease in unassigned effort coupled with increases in both trawl and beam trawl effort from 2003. The remainder of this none category comprises of unregulated gear types and mesh sizes, this has represented approximately 26-35% of nominal effort since 2003. Refer to Section 6.6.4 for a break down of this group by mesh size. Due to the lack of Irish mesh size information prior to 2003, discussions are primarily focused on data from 2003 onwards. Recent Irish Sea fisheries are dominated by demersal trawling and seining (category 4a) across the whole period, having remained proportionally stable since 2003, (between 53-57% of the total). Actual effort within category 4a has declined, reflecting the trend in total nominal effort (Figure 6.2.4.1). Of remaining effort, beam trawling accounts for 12-16%, while all other regulated gears account for 1%.

Demersal trawl and seining is dominated by gear group 4.a.ii having 70-89mm mesh (Figure 6.2.4.2), accounting for an increasing proportion of annual effort within this group. Whilst effort in 2006 declined, 2007 levels are similar to that of 2004-2005. Category 4.a.iv (100-

119mm) accounts for most of the remaining trawl effort, which in contrast, shows a continual decline in effort contribution from 40% in 2003 to 10% in 2007. Within both mesh categories the majority of effort is not allocated to a special condition, although two special conditions are utilised in 2007, IIA.8.c (<5% cod) and IIA.8.d (<5% cod, plaice and sole) (Figure 6.2.4.3 A & B). Effort within these special conditions is relatively low, the latter having a greater allocation. Within 4a.ii special condition IIA.8.d has been increasing whilst IIA.8.c has been decreasing. In 4a.iv however, effort within both special conditions has been decreasing. The remaining regulated mesh sizes within 4a are of little importance, accounting for ~1% of effort within this gear group.

Irish Sea Beam trawl effort occurs primarily within the 80-89mm mesh band, 4.b.i, to which no special conditions have been applied. A declining trend, with some fluctuation, is observed within this group (Table 6.2.4.1). Effort allocation within the two larger mesh bands has been minimal, but is variable. Note, Belgium beam trawl data for the Irish Sea contains assumed mesh sizes, as described in section 5.5.2.

Gross Tonnage effort (GT*days-at-sea) shows similar trends and effort division between gear and mesh categories to that of nominal effort. Overall GT effort has declined by 31% since 2003, levelling off over the last two years (Table 6.2.4.4). The dominant activity trawling, accounting for 53-57% of GT effort, reflects this decline. Effort by beam trawlers has also declined, by around 46% since 2003. Gillnetting GT effort is negligible. Remaining effort is within the “none” category representing 22-32% of GT effort.

In terms of the trawl grouping (4.a.), the small mesh gear group 4.a.ii (70-89mm) dominates (Figure 6.2.4.5), accounting for an increasing proportion of the effort, 88% in 2007. GT effort showed a slight increasing trend up until 2005, having fluctuated since. Gear group 4.a.iv (100-119mm), previously of importance, has declined by 83% since 2003, with a sharp reduction in 2004. As with nominal effort, 4.a.iii (90-99mm) and 4.a.v (≥120mm) each account for a negligible proportion of effort. GT effort within the special conditions of 4a.ii and 4a.iv is low, showing the same trends as those seen in nominal effort.

Beam trawls account for 14-21% of the total GT effort, the majority of which is within the small mesh group, 4.b.i (80-89mm). There are no special conditions relating to this gear type within the Irish Sea. Since 2003, effort deployed within this category has fluctuated with an overall declining trend (Table 6.2.4.2). Effort in the other mesh size categories is negligible.

With regards to the number of vessels observed in gear and mesh groupings, the group acknowledge that the total maximum may be an over estimate of the actual number of vessels. This is due to vessels changing gear type and mesh size within the year. Values listed represent maximum numbers of vessels observed in national fisheries and quarters.

The total number of vessels shows a declining trend over the whole period (Table 6.2.4.6), of around 20% since 2000 (15% since 2003). This does not reflect the trend in kW*days where the early period remained relatively stable, and only started to decline around 2003. As with the effort measures discussed above, within the Irish Sea the number of vessels within categories should only be considered from 2003 onwards, due to the lack of mesh size information within Irish data prior to this.

Demersal trawl and seining containing the greatest vessel numbers, demonstrates a declining trend, of around 27% (Figure 6.2.4.7). This decline is greater than that observed by the overall total vessel numbers, resulting in a slightly reduced proportion of trawl vessels over time. Within the trawl category (Figure 6.2.4.7) grouping 4.a.ii (70-89mm) again dominates, with a maximum of 164 vessels in 2007. These numbers have fluctuated since 2003. Two special conditions occur within this category. IIA.8.d has fluctuated around 63 vessels, and IIA.8.c with fewer vessels, shows some decline in recent years (Table 6.2.4.6). The second category of interest, 4.a.iv (100-119mm) has shown a decline, particularly from 2003 to 2005 (51%). A small number of vessels within this category are assigned to special conditions, IIA.8.c and IIA.8.d. 4.a.v (≥120mm) has declined from 12 to just 3 vessels in 2007. Whereas vessel numbers in category 4.a.iii (90-99mm), although low, have increased.

There has been little change in the number of beam trawl vessels over time, having consistently accounted for a small percentage of vessels within the area (10-12%) (Table 6.2.4.3). Vessels employing beam trawls show a relative decline of around 5%, equating to a small change in actual vessel numbers with little impact on the total. Some decline in vessels may result from national decommissioning schemes carried out over the period, alternatively vessels moving to fishing areas unrestricted by the effort regulations of Annex IIA. The beam trawl category is dominated by the smaller 4.b.i group (80-89mm) which has remained relatively stable. There have been one or two vessels operating intermittently within the larger beam trawl groups (4.b.ii and 4.b.iii) over the period.

Effort in terms of gross tonnage days-at-sea (GT*days) shows very similar evolution of fishing effort to that of effort in kW days-at-sea overall, indicating that vessels have not increased power to increase efficiency. These two effort measures, in addition to the number of vessels were compared by standardising against values for 2003. These comparisons were made for 4.a.ii none, 4.a.iv none, and 4.b.i none and are shown in Figures 6.2.4.8-10. The years prior to 2003 should be discounted from this comparison as Irish data is not included, as discussed above. Trends in vessels to those of days at sea effort vary with category.

Within 4a.ii none both nominal and GT effort were previously tracking one another, in the last two years however there has been some separation, possibly suggesting some increase in nominal effort efficiency. In addition, relative vessel numbers were slightly below effort with a similar trend this has reversed in 2007 where relative vessel numbers increased above nominal and GT effort (Figure 6.2.4.8). The earlier trend indicates that operating vessels dictated the effort within the area possibly even driving an increase in effort per vessel in 2004. In 2007 however, the data suggests there may now be some limiting influence of days at sea. Table 3.1.1 shows that the days at sea limit for 4.a.ii none fell from 227 days in 2006 to 204 in 2007, if days at sea have become limiting this shift in relationship will become more pronounced as days at sea continue to reduce, just 184 in 2008. Relative nominal and GT effort are tracking one another in a declining trend within 4a.iv none. Relative vessel numbers are above effort. This gives a strong suggestion that effort is limiting, as effort has declined at a greater rate than the number of vessels, particularly in 2007 (Figure 6.2.4.9). Table 3.1.1 shows that the days at sea limit for 4.a.iv none has fallen from 120 days per year in 2004 to 105 days in 2007, reducing further still in 2008 to 86 days. In relation to 4.b.i none however, there is a similarity between relative nominal and GT effort which had appeared to be limiting vessel numbers although vessel numbers increased in 2007 (Figure 6.2.4.10).

Table 6.2.4.1 Irish Sea. Trend in nominal effort (kW*days at sea) by derogation 2000-2007.

ANNEX	REG AREA (	REG GEAR	SPECON	2000	2001	2002	2003	2004	2005	2006	2007	Relative to 2003
IIa	2c	4ai	none				2777	4122	18418	12724		-1.00
IIa	2c	4aii	IIA81c	816647	843328	730614	857238	590593	616479	499933	419718	-0.51
IIa	2c	4aii	IIA81d	1241690	1408222	1342256	1579312	1649543	1608666	1529239	1715490	0.09
IIa	2c	4aii	none	2387061	2019099	1149888	2426833	2646713	2770202	2635597	2800894	0.15
IIa	2c	4aiii	IIA81d	9843	1005	8360	7055	6473	11629	12282	2438	-0.65
IIa	2c	4aiii	none	23649	11655	1058	13036	62206	43273	27582	42106	2.23
IIa	2c	4aiv	IIA81c	73511	129860	234656	285247	154851	55663	50133	28048	-0.90
IIa	2c	4aiv	IIA81d	517135	686944	858339	787311	674296	452434	400938	226132	-0.71
IIa	2c	4aiv	IIA81k	10602	12968	38861	19139	53303				-1.00
IIa	2c	4aiv	none	1286542	1798982	1774026	2175272	942430	817534	642151	315420	-0.85
IIa	2c	4av	IIA81c	82	1154	902	2026	264	820	6254	1712	-0.15
IIa	2c	4av	IIA81d	6262	1887	5878	18487	3158			333	-0.98
IIa	2c	4av	none	149	243	588	94486	5277	4670	7786	1218	-0.99
IIa	2c	4bi	none	1014443	1516762	1765013	1915493	1492649	1798545	1367599	1198233	-0.37
IIa	2c	4bii	none				25244	5710	12573		12769	-0.49
IIa	2c	4biii	none	288			409658	17011	12670			-1.00
IIa	2c	4ci	none	470			1961		26062	3395	1387	-0.29
IIa	2c	4cii	none	18486	10971	6927	42721	35183	4492	10612	6314	-0.85
IIa	2c	4ciii	none	4765	2442	6477	14189	8951	762	22186	32848	1.32
IIa	2c	4civ	none		350	1522	191	1432	3239			-1.00
IIa	2c	4d	none	523						475		
IIa	2c	4e	none	176599	185402	86160	47386	53583	81118	22301	3852	-0.92
IIa	2c	none	IIA81c *	362	1086	12670	8326	8688	5068	724		-1.00
IIa	2c	none	IIA81d *	113					3345	110		
IIa	2c	none	none	5390164	5219695	5506348	2419235	2647736	2100750	1876032	2236709	-0.08
Sum				12979386	13852055	13530543	13152623	11064172	10448412	9128053	9045621	-0.31

* inconsistent data format

Table 6.2.4.2 Irish Sea. Trend in effort (GT*days at sea) by derogation 2003-2007.

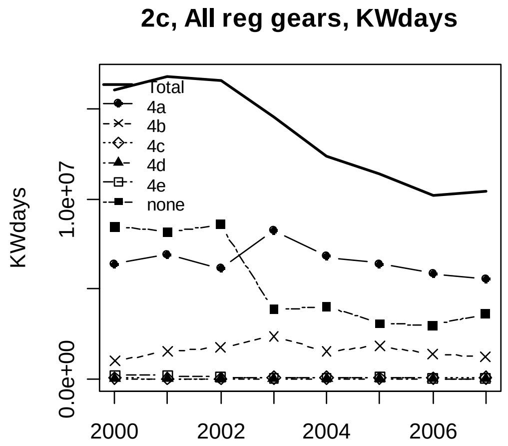
ANNEX	REG AREA	REG GEAR	SPECON	2003	2004	2005	2006	2007	Relative to 2003
IIa	2c	4ai	none	551	2128	4594	5027		-1.00
IIa	2c	4aii	IIA81c	232241	149959	160709	135726	113818	-0.51
IIa	2c	4aii	IIA81d	434271	444270	438004	420109	469824	0.08
IIa	2c	4aii	none	800409	872633	910823	846594	883463	0.10
IIa	2c	4aiii	IIA81d	2151	1824	2978	2757	876	-0.59
IIa	2c	4aiii	none	5840	18418	15212	7160	13604	1.33
IIa	2c	4aiv	IIA81c	96323	53416	18970	18299	10049	-0.90
IIa	2c	4aiv	IIA81d	273553	230163	148855	131536	72577	-0.73
IIa	2c	4aiv	IIA81k	4191	11557				-1.00
IIa	2c	4aiv	none	710905	303045	251279	199253	102612	-0.86
IIa	2c	4av	IIA81c	507	81	202	2236	632	0.25
IIa	2c	4av	IIA81d	5666	1032			153	-0.97
IIa	2c	4av	none	33095	2380	1819	2473	484	-0.99
IIa	2c	4bi	none	809280	596162	716345	517778	435183	-0.46
IIa	2c	4bii	none	6689	1280	2867		6565	-0.02
IIa	2c	4biii	none	104870	3362	3560			-1.00
IIa	2c	4ci	none	547		6995	331	152	-0.72
IIa	2c	4cii	none	10938	8879	1187	2205	2210	-0.80
IIa	2c	4ciii	none	5626	3530	144	5159	8988	0.60
IIa	2c	4civ	none	46	490	779			-1.00
IIa	2c	4d	none				45		
IIa	2c	4e	none	29850	28273	52070	44808	10135	-0.66
IIa	2c	none	IIA81c *	1090	1124	611	499		-1.00
IIa	2c	none	IIA81d *			555	17		
IIa	2c	none	none	668627	809001	582085	539751	654673	-0.02
Sum				4237266	3543007	3320643	2881763	2785998	-0.34

* inconsistent data format

Table 6.2.4.3 Irish Sea. Trend in effort (number of vessels, sum over maximum number of national vessels) by derogation 2000-2007.

ANNEX	REG AREA (	REG GEAR	SPECON	2000	2001	2002	2003	2004	2005	2006	2007	Relative to 2003
IIa	2c	4ai	none				3	2	10	6		-1.00
IIa	2c	4aii	IIA81c	30	29	29	26	22	23	19	14	-0.46
IIa	2c	4aii	IIA81d	60	57	64	64	63	66	59	62	-0.03
IIa	2c	4aii	none	84	69	41	73	64	79	74	88	0.21
IIa	2c	4aiii	IIA81d	2	2	1	3	3	5	4	3	0.00
IIa	2c	4aiii	none	8	7	5	5	10	10	9	12	1.40
IIa	2c	4aiv	IIA81c	8	20	18	19	11	8	4	5	-0.74
IIa	2c	4aiv	IIA81d	29	26	35	24	25	20	22	12	-0.50
IIa	2c	4aiv	IIA81k	1	5	6	3	3				-1.00
IIa	2c	4aiv	none	57	60	53	75	42	31	24	25	-0.67
IIa	2c	4av	IIA81c	1	2	1	2	1	1	2	1	-0.50
IIa	2c	4av	IIA81d	2	1	1	3	2			1	-0.67
IIa	2c	4av	none	1	1	1	7	3	2	2	1	-0.86
IIa	2c	4bi	none	25	26	32	41	43	44	36	39	-0.05
IIa	2c	4bii	none				2	1	2		3	0.50
IIa	2c	4biii	none	1			2	2	1			-1.00
IIa	2c	4ci	none	1			1		10	2	2	1.00
IIa	2c	4cii	none	4	5	3	6	4	4	5	5	-0.17
IIa	2c	4ciii	none	3	1	2	5	3	1	6	8	0.60
IIa	2c	4civ	none		1	1	1	2	2			-1.00
IIa	2c	4d	none	1						1		
IIa	2c	4e	none	6	8	6	3	4	5	3	3	0.00
IIa	2c	none	IIA81c *	2	2	3	3	2	3	2		-1.00
IIa	2c	none	IIA81d *	1					1	1		
IIa	2c	none	none	132	106	101	61	66	70	71	83	0.36
Sum				459	428	403	432	378	398	352	367	-0.15

* inconsistent data format



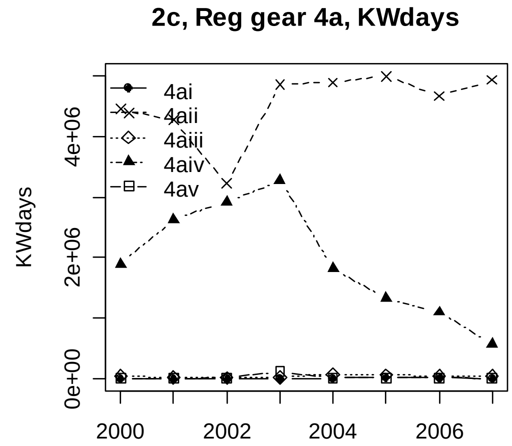
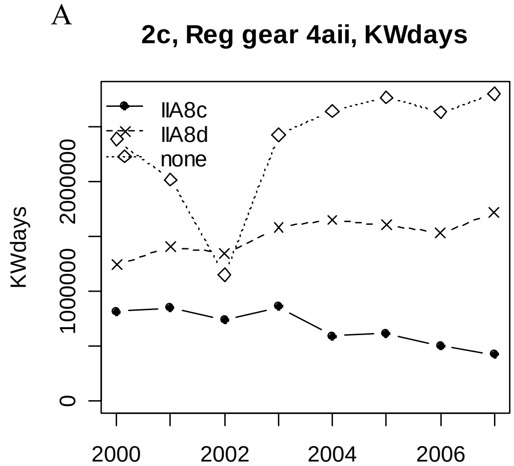


Figure 6.2.4.1. Irish Sea. Trend in nominal effort (kW*days-at-sea) 2000-2007.

Figure 6.2.4.2. Irish Sea. Trend in nominal effort (kW*days at sea) for 4.a, gear groups (demersal trawls and Danish seines) 2000-2007. Note that Irish data are only included for 2003-2007.

A



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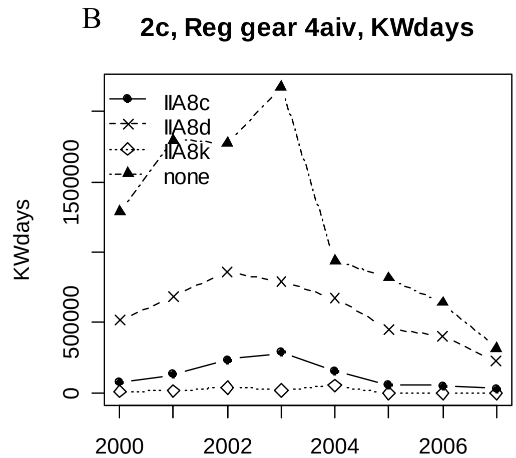


Figure 6.2.4.3 A & B. Irish Sea. Trend in nominal effort (kW*days at sea) by 4a gear groups 2000-2007; breakdown by special condition.

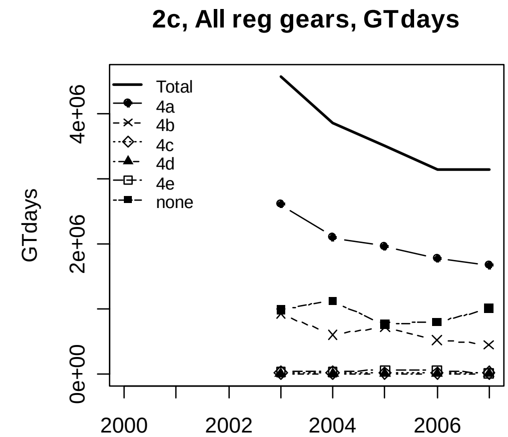


Figure 6.2.4.4. Irish Sea. Trend in GT*days-at-sea effort 2003-2007.

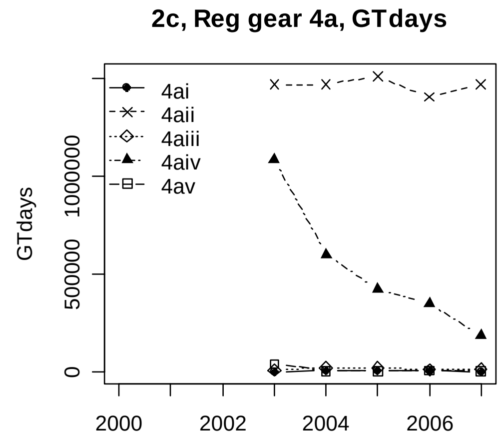


Figure 6.2.4.5. Irish Sea. Trend in GT*days-at-sea effort for 4.a, gear groups (demersal trawls and Danish seines) 2003-2007.

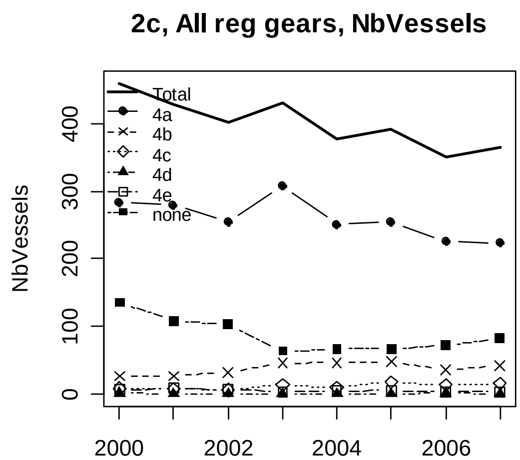


Figure 6.2.4.6. Irish Sea. Trend in number of vessels (sum over maximum number of national vessels) 2000-2007

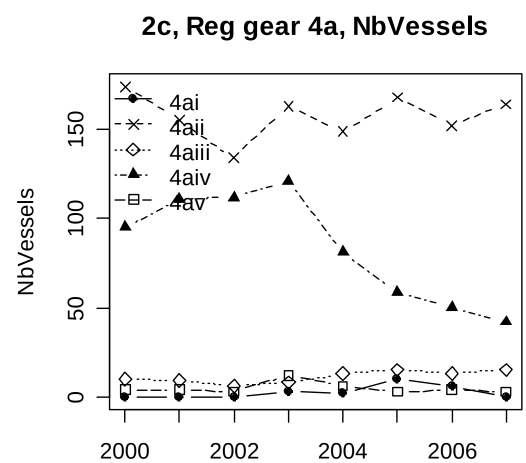
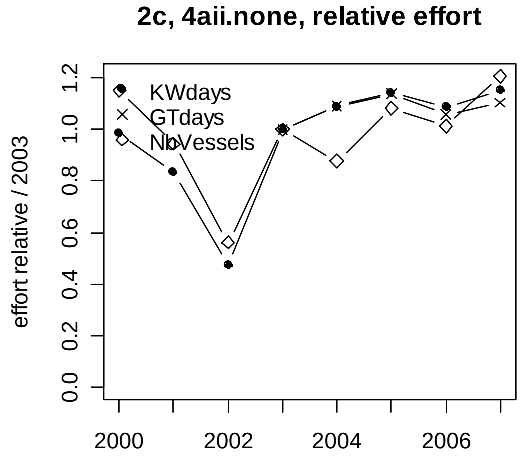


Figure 6.2.4.7. Irish Sea. Trend in number of vessels (sum over maximum number of national vessels) for 4.a, gear groups (demersal trawls and Danish seines) 2000-2007. Note that Irish data are only included for 2003-2007.



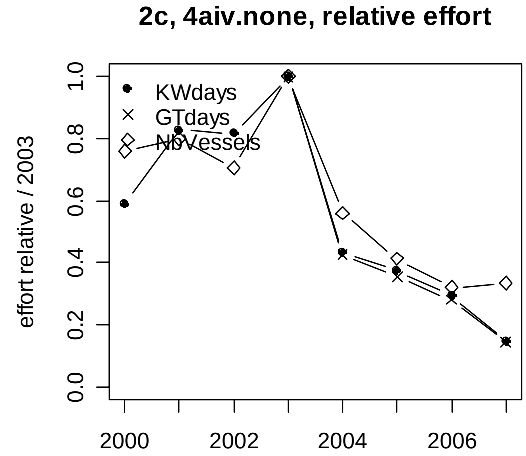


Figure 6.2.4.8. Irish Sea. kW*days-at-sea, GT*days-at-sea, and maximum vessel numbers plotted relative to their 2003 value for 4.a.ii with no special conditions (demersal trawls and Danish seines 70-89mm) 2000-2007.

Figure 6.2.4.9. Irish Sea. kW*days-at-sea, GT*days-at-sea, and maximum vessel numbers plotted relative to their 2003 value for 4.a.iv with no special conditions (demersal trawls and Danish seines 100-119mm) 2000-2007.

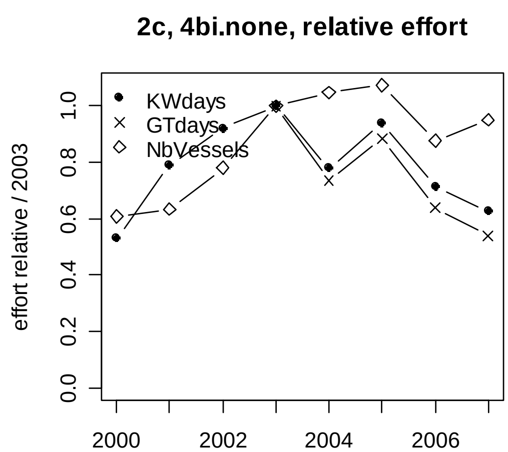


Figure 6.2.4.10. Irish Sea. kW*days-at-sea, GT*days-at-sea, and maximum vessel numbers plotted relative to their 2003 value for 4.b.i with no special conditions (beam trawls 80-89mm) 2000-2007.

6.2.5. Trend in effort by derogation in management area 2d: West of Scotland

Data quality: Irish vessels contribute to the effort total in management area 2d. According to the international data supplied this constitutes approximately 9-14% of overall effort in the region depending on year (see Table 6.2.1.1). Irish data was not disaggregated by mesh size before 2003. In all years Irish data is not split according to special condition status. Spain has been allocated 2,460,000 kW*days for demersal fishing in ICES sub areas V and VI under the Western Waters regulation (Con. Reg. (EC) 1415/2004). As no data has been supplied by Spain in relation to this subgroup it is not possible to know whether any activity was conducted in Division VIa. It should be noted, that it was not possible to quantify which portions of the effort were deployed in or outside the Cod Recovery Zone identified by the West of Scotland line in Article 2.2 of Annex IIA.

According to the data provided by Member States the fishery West of Scotland is primarily an otter trawl fishery; beam trawls and static gears are hardly used (but see comments on long lines below). In terms of kWdays the overall nominal effort in ICES division VIa displays a decrease of 44% since 2002. Overall effort followed a continuous downward trend (which had already started by 2001) until 2006. Total nominal effort has increased in 2007. Trawl and seine gears (4a) effort has increased slightly from 2006 to 2007 but the main gear responsible for the overall increase is long lines (4e), (Table 6.2.5.1 and Figure 6.2.5.1). Effort which could not be assigned to any existing derogation fell by 56%. This is largely explained by the fact Irish effort data prior to 2003 contained no information on mesh size. Trawls with mesh 70-89mm are thought to be the main gears in use by the Irish fleet prior to 2003 and from Figure 6.2.5.2 it can be seen that recorded effort in this mesh size range increases in 2003 and is mainly recorded as extra effort in the 4.a.ii.none category (Table 6.2.5.1). Unidentified effort also comprises mesh size groups 32-54mm and 55-69mm targeting pelagic resources. Also of note from Figure 6.2.5.2 is the fact that effort in category 4aiv has stopped declining and that category 4aii has become equivalent in significance to category 4av.

Figure 6.2.5.3 A-D shows nominal effort by special condition for each mesh size range within the trawl and seine gear type, (there is no figure for mesh range 16-32mm as all effort is in the no special condition category).

Overall effort reported in the small meshed trawls (gear group 4.a.ii, 70-89mm) is recorded as declining by 7% between 2002 and 2007 (Figure 6.2.5.3 A). The actual decrease in effort could be considerably larger, however, because of the Irish fleet effort with undeclared mesh size prior to 2003. As mentioned above effort in this mesh size range increased significantly in 2003 (the first year Irish effort data is disaggregated by mesh size). Transfer of effort from the 100-119mm trawl gear group is also possible. Figure 6.2.5.3A shows effort recorded for vessels qualifying for special condition IIA8.1.d greater than effort recorded for vessels not qualifying for special condition. Irish effort assigned to this mesh size range from 2003 was primarily assigned to 4.a.ii none. Effort in category IIA8.1.d has declined since 2003 but remained stable in category 4.a.ii none. Reported effort in the gear group 90-99mm rose from very low levels to nearly 1 million kW*days in 2003 (Table 6.2.5.1 and Figure 6.2.5.3 B). Only a small proportion of this increase can be attributed to Irish effort reporting including mesh size from 2003. The increase is mainly transfer of effort from other mesh sizes by

Scottish vessels. The contribution of this gear group to the overall effort in Division VIa is relatively minor however.

Historically, the highest effort was deployed by otter trawls of 100-119mm (gear group 4.a.iv, Table 6.2.5.1 Figure 6.2.5.2 & Figure 6.2.5.3 C). Effort since 2002 has decreased substantially in the three derogations of this gear group, by 77% for vessels not qualifying for special condition, 59% for vessels with low catch of cod, plaice and sole (special condition IIA8.1.d) and 80% for vessels with low catch of cod only (IIA8.1.c), although Figure 6.2.5.3 C shows that this last derogation is only a minor component of the effort in this mesh size range. Some of the reduction in 4.a.iv effort might be explained by a switch to mesh >120mm, (gear group 4.a.v). The rate of decrease in effort in the derogation 4.a.iv IIA81d appears to be slowing and effort in this derogation still exceeds overall effort in gear group 4.a.v. The pattern for 4.a.iv none is similar to that for 4.a.iv IIA81d and in this category recorded effort has increased slightly from 2006 to 2007.

Effort in the gear group 4.a.v (mesh ≥120mm) is mostly conducted by vessels not qualifying for special conditions and effort in 2007 for this derogation is only 5% less than the effort recorded in 2002 (Table 6.2.5.1 and Figures 6.2.5.2 and 6.2.5.3 D). Figure 6.2.5.3D however shows how effort in this derogation rose sharply between 2001 and 2003 but has since fallen significantly in all subsequent years.

Table 6.2.5.2 shows effort in terms of gross tonnage days at sea (GT*days at sea). This measure of effort by basic gear category is shown in Figure 6.2.5.4. As for kW*days, the effort is dominated by demersal trawl gears. Attention is therefore concentrated on investigating the demersal trawl gears by mesh size category (Figure 6.2.5.5) and then the derogations within each mesh size category (Figure 6.2.5.6 A-D). However, long lines (4e) show a noticeable increase since 2003 and, as for kW*days, seem the primary reason for an overall increase in GT*days at sea recorded in the area between 2006 and 2007. This category is considered further when comparing between effort measures. From Table 6.2.5.2 and Figures 6.2.5.4 to 6.2.5.6 it can be seen the evolution of fishing effort indicated by both effort measures is very similar.

Table 6.2.5.3 records number of vessels by derogation. To record an annual number of vessels the maximum number from any of the four quarters within the year is chosen. Because vessels are not necessarily assigned exclusively to a single derogation, some multiple counting may occur if summing across derogations. The number of vessels by basic gear category is shown in Figure 6.2.5.7. As might be expected from the kW*days and GT*days results the large majority of vessels are recorded as using demersal trawl gear. The increase in this category in 2003 again reflects records from Ireland including mesh size from 2003, (before this the vessels may well have been unclassified, i.e. assigned to ‘none none’).

For the most significant categories of trawl/seine gear and for long line gears the three measures of kW*days, GT*days and number of vessels are compared by standardising against values for 2003. These comparisons are shown in Figures 6.2.5.8 to 6.2.5.13. For category 4.a.ii none there is the indication number of vessels and kWdays have remained relatively constant since 2003 while GT*days has declined which would indicate a greater proportion of effort by smaller boats. For category 4.a.ii IIA81d the trends over time between the three measures are all very consistent. This would suggest changes in the kW*days at sea and GT*days at sea measures reflect changes in the number of vessels operating in the area. For derogation 4.a.iv IIA81d Figure 6.2.5.11 suggests that within an overall picture of declining effort and vessel numbers, effort per vessel fell up to 2003 but has increased again since. For derogation 4.a.iv.none, however, the rate of decrease in number of vessels has slowed since 2003 such that the number looks to have become constant. The kWdays and GTdays measures continued to fall more quickly than number of vessels before recovering in 2007. For derogation 4.a.v.none the number of vessels has remained effectively constant since 2005 but the kWdays and GTdays measures have continued to fall.

Figure 6.2.5.13 shows the effort comparisons for longlines (gear 4e). It clearly indicates an increase in effort per vessel since 2003 as well as an increase in the number of vessels since 2005.

Table 6.2.5.1 West of Scotland. Trend in nominal effort (kW*days at sea) by derogation, 2000-2007.

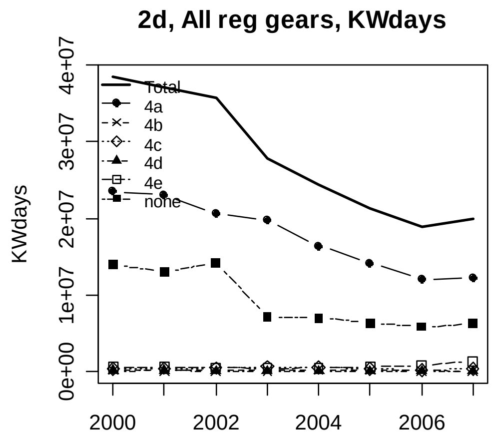
ANNEX	REG AREA (	REG GEAR	SPECON	2000	2001	2002	2003	2004	2005	2006	2007	Rel.Change to 2002
IIa	2d	4ai	none	198301	50818	59143	92633	78388	63385	32513	21264	-0.64
IIa	2d	4aii	IIA81c	123551	147168	168899	123861	61960	29857	36123	46075	-0.73
IIa	2d	4aii	IIA81d	4265875	4379082	4591156	4835168	4124056	3625138	3377317	3248673	-0.29
IIa	2d	4aii	none	962330	685744	391507	1360052	1480493	1421405	1437070	1508092	2.85
IIa	2d	4aiii	IIA81d	447	3275	4056	8832	14156	21766	48405	29802	6.35
IIa	2d	4aiii	none	5403	7826	7188	896317	1058559	662516	706876	1095534	151.41
IIa	2d	4aiv	IIA81c	68043	72223	128437	74352	42049	14101	22890	25675	-0.80
IIa	2d	4aiv	IIA81d	10734069	9932041	8603926	5444083	4390955	4849918	3744744	3537323	-0.59
IIa	2d	4aiv	none	7036981	7722944	5150138	2863142	1951446	1210747	929323	1162017	-0.77
IIa	2d	4av	IIA81c			894			5564	749	20143	21.53
IIa	2d	4av	IIA81d	61256	54510	79751	293039	316909	391431	209277	176904	1.22
IIa	2d	4av	none	16775	46690	1403705	3768062	2859945	1833914	1496951	1331246	-0.05
IIa	2d	4bi	none	22310	2391		13658	25947	9874	9325	1252	
IIa	2d	4biii	IIA81c				30385	35077				
IIa	2d	4biii	none	98149	84541	103897						-1.00
IIa	2d	4biv	IIA81c					1519				
IIa	2d	4biv	none	4894			60023	151480	119958	81194		
IIa	2d	4ci	none		3620	19769	51	13723	128		1703	-0.91
IIa	2d	4cii	none	19784	45983	25310	32140	7957	44998	42000	173548	5.86
IIa	2d	4ciii	none		60143	128117	55521	1026	44981	1468	512	-1.00
IIa	2d	4civ	none	260651	251728	219473	488537	432635	218291	87952	81591	-0.63
IIa	2d	4d	IIA81g		64768							
IIa	2d	4d	none	2633	1416		636	320				
IIa	2d	4e	none	542649	561290	479614	355429	470594	556972	755720	1281919	1.67
IIa	2d	none	IIA81c	892	656	1079		0	0			-1.00
IIa	2d	none	IIA81d	1432					402	1561		
IIa	2d	none	none	12957828	13065177	16346452	15710266	18659378	16446534	13857749	12881814	-0.21
Sum				37384253	37244034	37912511	36506187	36178572	31571880	26879207	26625087	-0.30

Table 6.2.5.2 West of Scotland. Trend in effort (GT*days at sea) by derogation, 2003-2007.

ANNEX	REG AREA	REG GEAR	SPECON	2003	2004	2005	2006	2007	Rel. Change to 2003
IIa	2d	4ai	none	33304	38454	20210	15169	8834	-0.73
IIa	2d	4aii	IIA81c	32919	18251	11029	13488	18860	-0.43
IIa	2d	4aii	IIA81d	1134055	957015	824145	770649	751288	-0.34
IIa	2d	4aii	none	450860	482338	459906	449222	406745	-0.10
IIa	2d	4aiii	IIA81d	1514	4408	5901	12318	9906	5.54
IIa	2d	4aiii	none	279067	312742	204640	215329	313210	0.12
IIa	2d	4aiv	IIA81c	28628	15662	4938	8464	9505	-0.67
IIa	2d	4aiv	IIA81d	1916722	1523764	1665878	1274665	1208892	-0.37
IIa	2d	4aiv	none	1091007	730061	469903	362556	450875	-0.59
IIa	2d	4av	IIA81c			2054	276	7436	
IIa	2d	4av	IIA81d	125928	140406	167417	92259	77957	-0.38
IIa	2d	4av	none	1589806	1256749	803085	633892	569703	-0.64
IIa	2d	4bi	none	6140	9354	3876	2967	636	-0.90
IIa	2d	4biii	IIA81c	14060	14451				-1.00
IIa	2d	4biv	IIA81c		703				
IIa	2d	4biv	none	19249	50073	44549	31348		-1.00
IIa	2d	4ci	none	11	9463	29		340	29.91
IIa	2d	4cii	none	13212	2480	16541	13369	57830	3.38
IIa	2d	4ciii	none	22236	432	25022	145	75	-1.00
IIa	2d	4civ	none	228423	220953	117035	37495	34800	-0.85
IIa	2d	4d	none	30	89				-1.00
IIa	2d	4e	none	219809	271845	372913	448661	637336	1.90
IIa	2d	none	IIA81c		248	124			
IIa	2d	none	IIA81d			105	259		
IIa	2d	none	none	7685148	10333006	9341072	8433761	7666967	0.00
Sum				14892128	16392947	14560372	12816292	12231195	-0.18

Table 6.2.5.3 West of Scotland. Trend in effort (number of vessels, sum over maximum number of national vessels) by derogation, 2000-2007.

ANNEX	REG AREA	REG GEAR	SPECON	2000	2001	2002	2003	2004	2005	2006	2007	Rel. Change to 2002
IIa	2d	4ai	none	11	6	7	12	7	11	9	11	0.57
IIa	2d	4aii	IIA81c	8	8	12	10	8	5	6	3	-0.75
IIa	2d	4aii	IIA81d	167	170	184	181	145	113	122	113	-0.39
IIa	2d	4aii	none	67	44	20	50	59	53	52	61	2.05
IIa	2d	4aiii	IIA81d	1	2	2	1	3	2	3	4	1.00
IIa	2d	4aiii	none	4	3	3	50	53	35	41	61	19.33
IIa	2d	4aiv	IIA81c	5	3	7	6	2	2	2	2	-0.71
IIa	2d	4aiv	IIA81d	81	87	76	58	38	33	30	20	-0.74
IIa	2d	4aiv	none	197	193	142	92	65	50	42	42	-0.70
IIa	2d	4av	IIA81c			1			1	1	1	0.00
IIa	2d	4av	IIA81d	4	3	7	6	7	7	4	2	-0.71
IIa	2d	4av	none	7	10	54	89	57	40	40	38	-0.30
IIa	2d	4bi	none	3	1		2	4	2	2	1	
IIa	2d	4biii	IIA81c				1	1				
IIa	2d	4biii	none	3	3	1						-1.00
IIa	2d	4biv	IIA81c					1				
IIa	2d	4biv	none	1			1	2	1	1		
IIa	2d	4ci	none		1	2	1	1	1		2	0.00
IIa	2d	4cii	none	3	3	2	4	3	4	3	9	3.50
IIa	2d	4ciii	none		5	5	2	1	1	2	1	-0.80
IIa	2d	4civ	none	13	14	6	11	11	7	3	10	0.67
IIa	2d	4d	IIA81g		1							
IIa	2d	4d	none	2	1		1	1				
IIa	2d	4e	none	18	14	14	11	10	10	15	20	0.43
IIa	2d	none	IIA81c	1	1	1		1	1			-1.00
IIa	2d	none	IIA81d	1					1	1		
IIa	2d	none	none	137	117	125	117	125	107	114	109	-0.13
Sum				734	690	671	706	605	487	493	510	-0.24



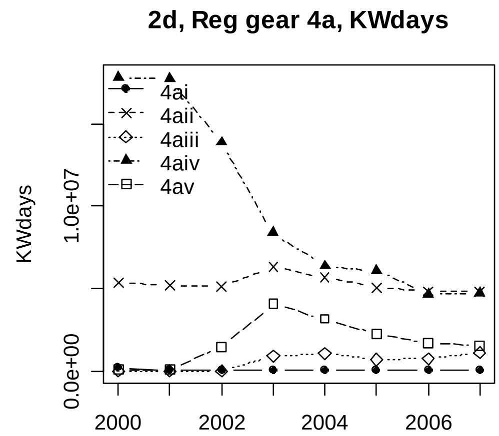


Figure 6.2.5.1 West of Scotland. Trend in nominal effort (kW*days at sea) by gear types, 2000-2006.

Figure 6.2.5.2 West of Scotland. Trend in nominal effort (kW*days at sea) by 4a gear groups, 2000-2006.

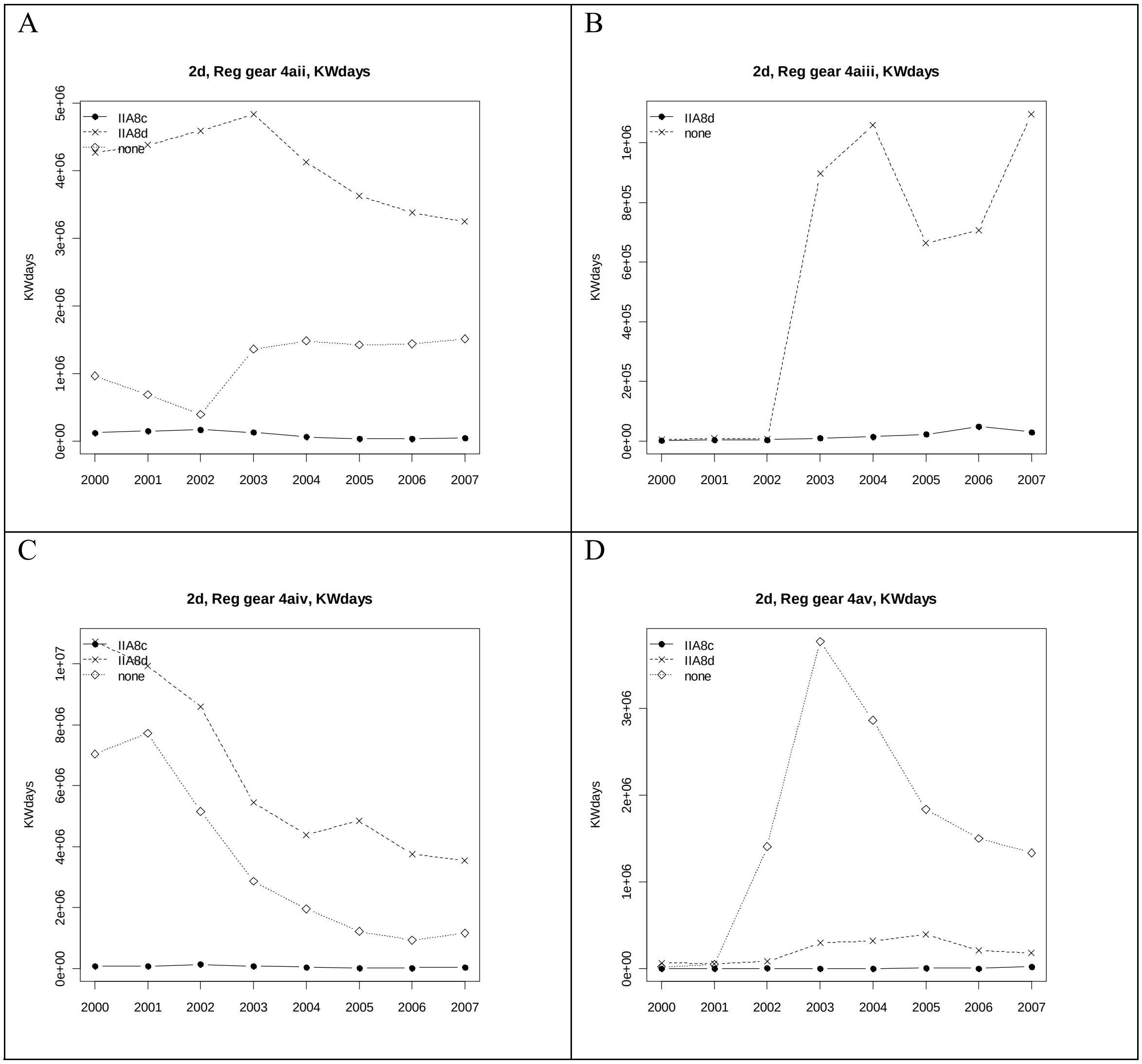


Figure 6.2.5.3 A-D West of Scotland. Trend in nominal effort (kW*days at sea) by 4a gear groups, 2000-2006; breakdown by special condition.

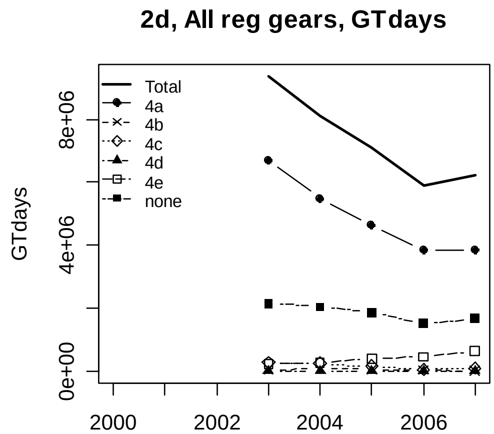


Figure 6.2.5.4 West of Scotland. Trend in nominal effort (GT*days at sea) by gear types, 2000-2006.

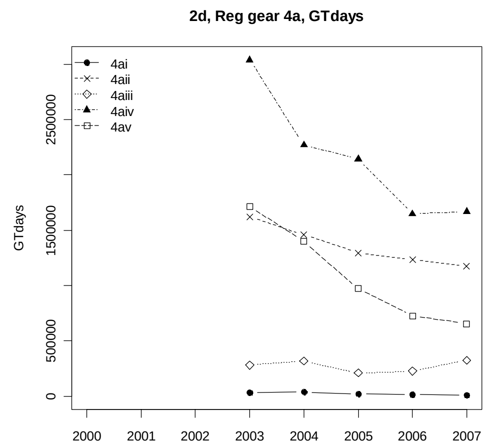


Figure 6.2.5.5 West of Scotland. Trend in nominal effort (GT*days at sea) by 4a gear groups, 2000-2006.

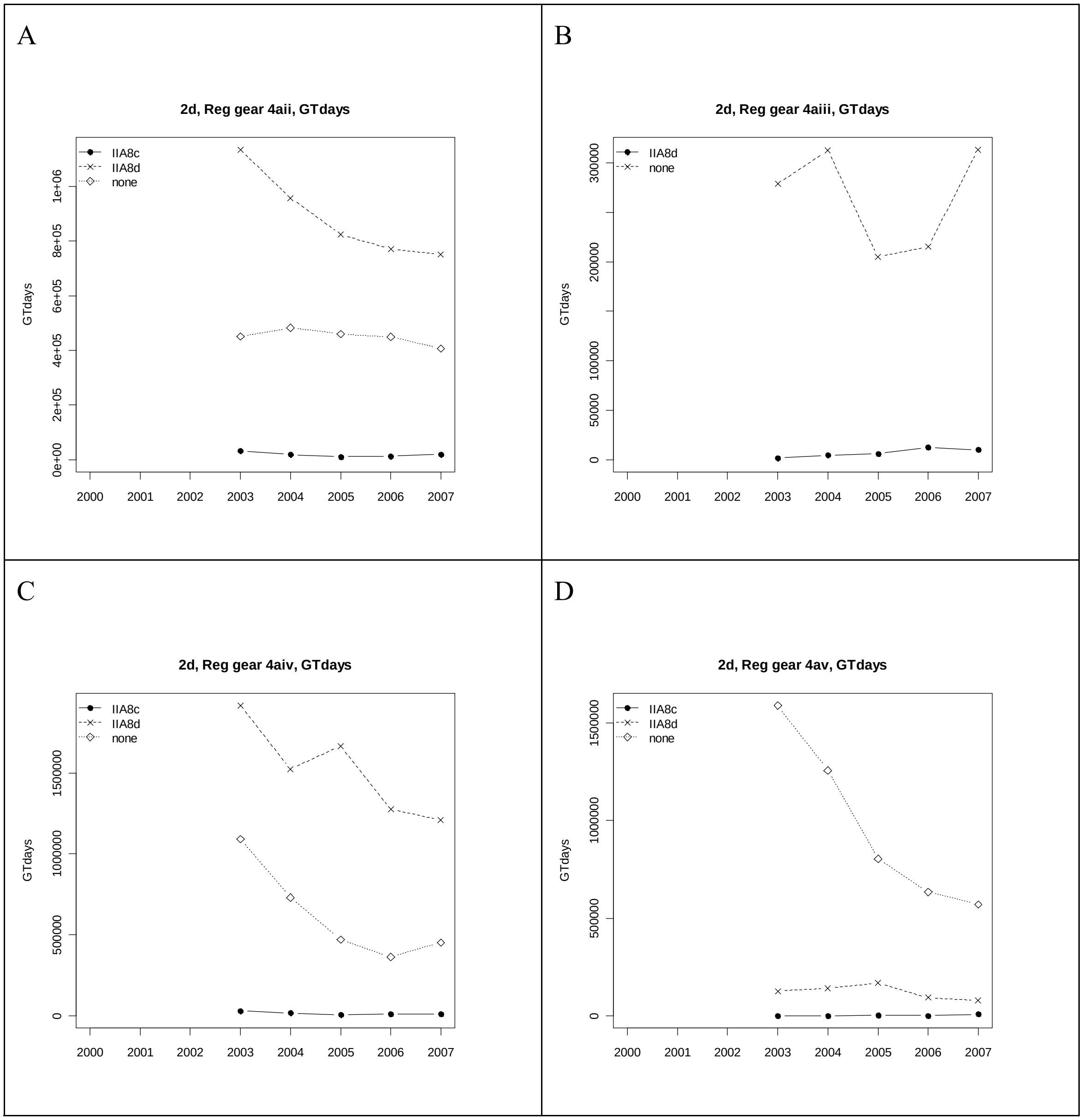


Figure 6.2.5.6 A-D West of Scotland. Trend in nominal effort (GT*days at sea) by 4a gear groups, 2000-2006; breakdown by special condition.

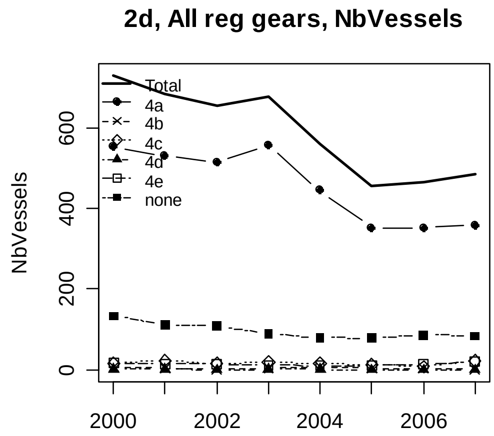


Figure 6.2.5.7 West of Scotland. Trend in number of vessels by gear types, 2000-2006.

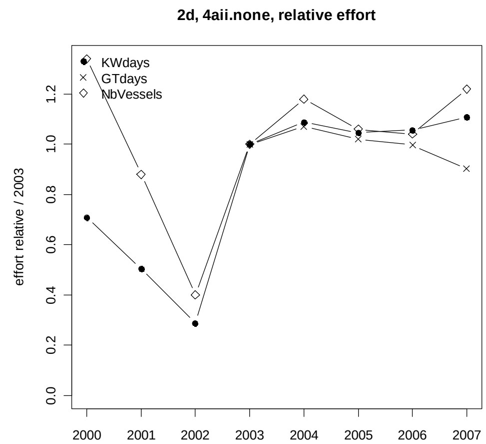


Figure 6.2.5.8 West of Scotland. effort measures plotted relative to their 2003 value. Gear 4.a.ii none (70-89mm; not qualifying for any special condition).

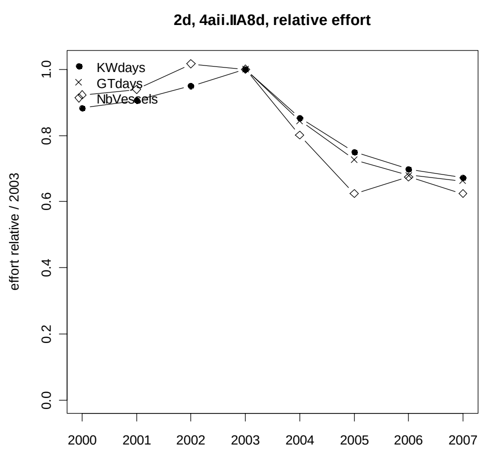


Figure 6.2.5.9 West of Scotland. effort measures plotted relative to their 2003 value. Gear 4.a.ii IIA81d (70-89mm; <5% of cod, plaice and sole in catch during 2002).

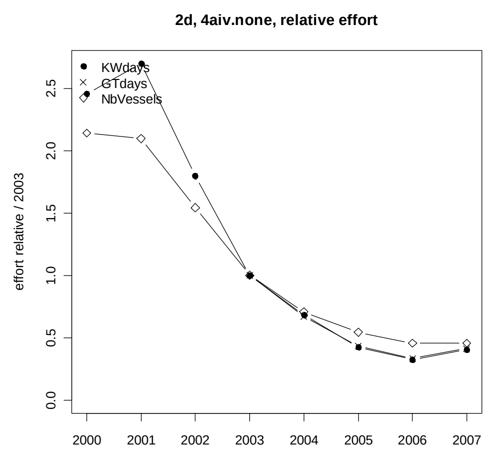


Figure 6.2.5.10 West of Scotland. effort measures plotted relative to their 2003 value. Gear 4.a.iv none (100-119mm; not qualifying for any special condition).

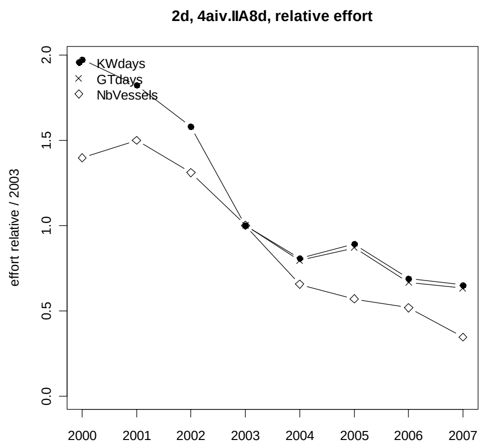


Figure 6.2.5.11 West of Scotland. effort measures plotted relative to their 2003 value. Gear 4.a.iv IIA81d (100-119mm; <5% of cod, plaice and sole in catch during 2002).

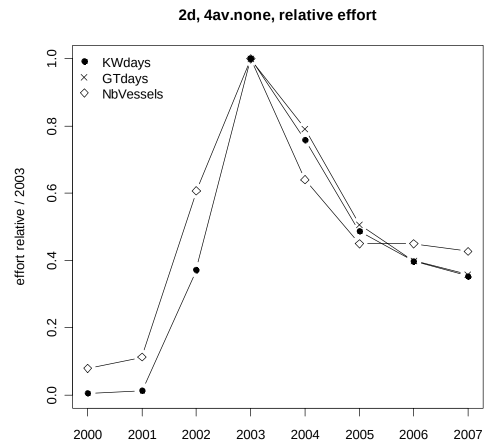


Figure 6.2.5.12 West of Scotland. effort measures plotted relative to their 2003 value. Gear 4.a.v none (≥120mm; not qualifying for any special condition).

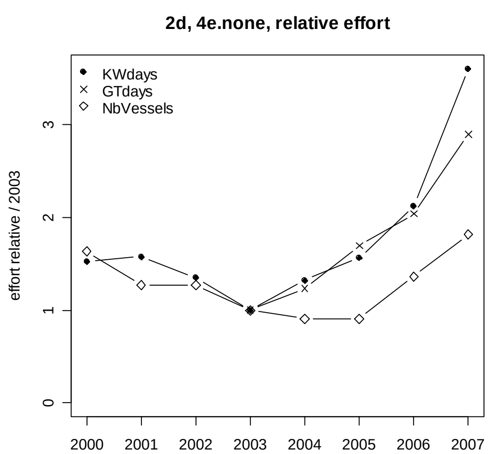


Figure 6.2.5.13 West of Scotland. effort measures plotted relative to their 2003 value. Gear 4e (longlines).

6.3. Trend in catch estimates including discards 2003-2007 by derogation and species

6.3.1. Trend in catches by Member State

As most data submissions by Member States continued to lack required information on numbers of samples, and of fish measured and aged, STECF-SGRST cannot estimate the precision of the fleet specific catch figures composed of both landings and discards provided in the following sections by management areas. Most experts have indicated that the national discard estimates are based on about 10-40 observer trips conducted annually by management area. The method of discard and catch estimation (sec. 5.6) does account for year, quarter, area, gear and mesh size effects as well as the aggregation by special conditions but disregards the country. Therefore, the catch information cannot be presented by country as requested in the ToR (sec. 5.1). As mentioned under the data availability (sec. 5.5) and under fishing effort analyses, STECF-SGRST considers the quantitative results and trends of some special conditions difficult to interpret as certain Member States have failed to aggregate their fleets accordingly. Special hints at data deficiencies are given under the following area specific sections. STECF-SGRST again notes that assignment of derogations is based on best expert knowledge and data availability. Specific data errors may exist regarding the huge data bases and the special knowledge required when dealing with them.

6.3.2. Trend in catch estimates in weight and numbers at age by derogation in management area 2a: Kattegat

The following tables list the landings and discards for the main species by derogations. The overall problem with this section is the absence of Danish discard data and that the Danish data of landings 2007 were not given by special condition. Sweden provided discard data for gear category 4a aiii (90 mm trawl) from 2003-2007 and for 4aiii special condition IIA81a (120mm square mesh window) as well as 4aii special condition IIA83b (mm sorting grid) for 2007.

Main species landed in weight are cod, Nephrops, plaice and sole. Other demersal species has low landings in the Kategatt.

The following table lists the landings for the main species by gear category

	COD		NEP		PLE		SOL	
Gear group	% 2003-2007	% of 2007	% 2003-2007	% of 2007	% 2003-2007	% of 2007	% 2003-2007	% of 2007
ai	0,8	1,1	0,16	0	0,1	0	0	0
aii	0,1	2,3	11,62	5,8	1,3	0,1	4,6	0,2
aiii	**75,1**	**73,9**	**86,76**	**91,3**	**50,6**	**44,9**	**47,2**	**58**
aiv	6,1	5,5	0,35	0,6	22,9	29,9	1,9	1,8
av	5,5	2,5	0,29	1,1	2	1,1	0,4	0,5
ci	1,5	1	0,01	0	1,7	1,2	13	13,3
cii	3,3	3,2	0,01	0	5,8	7	5,9	6,9
ciii	0,8	0,7	0	0	0,3	0,2	0,2	0,1
civ	0	0,1	0	0	0,1	0,1	0,2	0
4d	0	0	0,01	0	0,1	0	0,1	0,1
4e	0,1	0,2	0	0	0	0	0	0
none	6,7	9,6	0,79	1,2	15,1	15,4	**26,5**	**19**

Landing of Cod, Nephrops, Plaice and sole in Kattegatt by gear category presented as % of total 2007 and % of average landings 2003-2007.

Amongst the gear groups 90 mm trawl (4aii) takes the largest share of the landings 73 % of the cod landings, 91 % of the Nephrops landing, 50 % of the Plaice landings and 58 % of the landings of Sole 2007. The gear group (>100-<120) are responsible for a large share of the landings of Plaice, 30% but a limited amount of the landings of the other species. The unspecified group (none) are responsible for 19 % of the sole landings, The none group is exclusively a fact of the inclusion of vessels less than 10 m in the Danish catch data base.

The absence of discard data from the Danish fisheries makes it impossible to estimate discard - and catch rates from the entire Kattegat fisheries. Due to differences in national management systems as well as differences in fishing patterns it is not possible to consider the Swedish discard data representative for the Danish fishery. In Sweden the fishery is managed by weekly rations while Denmark in 2007 introduced individual vessel quotas. The fisheries in Sweden is also characterised by long periods of prohibition to land different species, particularly cod (for example in 2006 the cod fishery in Kattegatt were closed for 8 months). The different management regimes have implications on the discard patterns of fish, particularly fish discarded for quota reasons which for cod is an important problem in the Kattegat.

Table 6.3.2.1 and 6.3.2.2 show an overview of landed amount, discarded amount and discard rate for different species by special condition. The discard figures in the table should only be considered indicative since Swedish discard ratios, which could not be considered representative for the Danish fisheries, have been used to estimate Danish discards due to absence of Danish discard data in 2007. Further note that the Danish landings data for 2007 only are available by gear categories and not by special condition. Absence of this detailed data makes impact assessment of different special conditions on fishing mortality impossible.

Table 6.3.2.1 Kattegat: Landings (t), discards (t) and relative discard rates by species and derogations2003-2007

REG_AREA	SPECIES	YEAR	REG_GEAR	SPECON	LANDINGS	DISCARDS	DISC RATE BY GEAR
2a	ANF	2003	4aiii	none	9		
2a	ANF	2003	4aiv	none	1		
2a	ANF	2004	4aiii	none	1		
2a	ANF	2005	4aiii	none	1		
2a	ANF	2007	4aiii	none	1		
2a	COD	2003	4ai	none	49		
2a	COD	2003	4aii	IIA81d	5		
2a	COD	2003	4aii	none	177		
2a	COD	2003	4aiii	IIA81d	12		
2a	COD	2003	4aiii	none	1296	245	0,16
2a	COD	2003	4aiv	IIA81c	19		
2a	COD	2003	4aiv	none	60		
2a	COD	2003	4av	IIA81c	7		
2a	COD	2003	4av	none	65		
2a	COD	2003	4ci	none	5		
2a	COD	2003	4cii	none	62		
2a	COD	2003	4ciii	none	38		
2a	COD	2003	4civ	none	1		
2a	COD	2003	4e	none	4		
2a	COD	2003	none	none	207		
2a	COD	2004	4ai	none	9		
2a	COD	2004	4aii	none	26		
2a	COD	2004	4aiii	IIA81d	7		
2a	COD	2004	4aiii	none	1096	1068	0,49
2a	COD	2004	4aiv	IIA81c	15		
2a	COD	2004	4aiv	IIA81d	2		
2a	COD	2004	4aiv	none	42		
2a	COD	2004	4av	none	17		
2a	COD	2004	4ci	none	7		
2a	COD	2004	4cii	none	26		
2a	COD	2004	4ciii	none	7		
2a	COD	2004	4civ	none	2		
2a	COD	2004	4e	none	2		
2a	COD	2004	none	none	133		
2a	COD	2005	4ai	none	11		
2a	COD	2005	4aii	none	3		
2a	COD	2005	4aiii	IIA81d	2		
2a	COD	2005	4aiii	none	664	434	0,4
2a	COD	2005	4aiv	IIA81c	24		
2a	COD	2005	4aiv	none	62		
2a	COD	2005	4av	none	10		
2a	COD	2005	4ci	none	9		
2a	COD	2005	4cii	none	23		
2a	COD	2005	4ciii	none	4		
2a	COD	2005	4civ	none	1		
2a	COD	2005	none	none	111		
2a	COD	2006	4ai	none	5		
2a	COD	2006	4aii	none	1		
2a	COD	2006	4aiii	IIA81a	69		
2a	COD	2006	4aiii	IIa81l	20		
2a	COD	2006	4aiii	none	633	619	0,49

Table 6.3.2.1 continued

2a	COD	2006	4aiv	IIA81a	13		
2a	COD	2006	4aiv	none	23		
2a	COD	2006	4av	none	8		
2a	COD	2006	4ci	none	15		
2a	COD	2006	4cii	none	46		
2a	COD	2006	4ciii	none	1		
2a	COD	2006	4e	none	3		
2a	COD	2006	none	none	85		
2a	COD	2007	4ai	none	4		
2a	COD	2007	4aiii	IIA81a	85	19	0,19
2a	COD	2007	4aiii	none	296	1095	0,79
2a	COD	2007	4aiv	IIA81a	5		
2a	COD	2007	4aiv	none	26		
2a	COD	2007	4av	IIA81a	2		
2a	COD	2007	4av	none	26		
2a	COD	2007	4ci	none	7		
2a	COD	2007	4cii	none	17		
2a	COD	2007	4ciii	none	4		
2a	COD	2007	4e	none	1		
2a	COD	2007	none	none	34		
2a	HAD	2003	4aiii	none	13	1	0,09
2a	HAD	2003	4aiv	none	1		
2a	HAD	2004	4aiii	none	17	133	0,89
2a	HAD	2004	4aiv	none	1		
2a	HAD	2004	4cii	none	3		
2a	HAD	2005	4aiii	none	43	27	0,39
2a	HAD	2005	4av	none	1		
2a	HAD	2006	4aiii	none	22	54	0,71
2a	HAD	2006	4aiv	none	2		
2a	HAD	2007	4aiii	IIA81a	27	20	0,43
2a	HAD	2007	4aiii	none	14	6	0,31
2a	HAD	2007	4aiv	none	2		
2a	HAD	2007	4av	none	1		
2a	HKE	2003	4ai	none	3		
2a	HKE	2003	4aii	IIA81d	1		
2a	HKE	2003	4aii	none	10		
2a	HKE	2003	4aiii	none	29	1	0,04
2a	HKE	2003	4aiv	none	1		
2a	HKE	2003	4cii	none	1		
2a	HKE	2003	none	none	1		
2a	HKE	2004	4ai	none	1		
2a	HKE	2004	4aii	none	1		
2a	HKE	2004	4aiii	none	20	9	0,32
2a	HKE	2005	4aiii	none	10	51	0,83
2a	HKE	2006	4aiii	IIA81a	3		
2a	HKE	2006	4aiii	none	15	39	0,72
2a	HKE	2007	4ai	none	3		
2a	HKE	2007	4aiii	IIA81a	4	31	0,87
2a	HKE	2007	4aiii	none	17	112	0,87
2a	NEP	2003	4ai	none	7		
2a	NEP	2003	4aii	IIA81d	27		
2a	NEP	2003	4aii	none	720		
2a	NEP	2003	4aiii	IIA81d	6		
2a	NEP	2003	4aiii	none	815	146	0,15
2a	NEP	2003	4aiv	IIA81c	1		
2a	NEP	2003	4aiv	none	4		
2a	NEP	2003	4av	none	4		
2a	NEP	2003	none	none	9		
2a	NEP	2004	4aii	none	69		

Table 6.3.2.1 continued

2a	NEP	2004	4aiii	IIA81d	6		
2a	NEP	2004	4aiii	none	1511	236	0,14
2a	NEP	2004	4aiv	IIA81c	1		
2a	NEP	2004	4aiv	IIA81d	1		
2a	NEP	2004	4aiv	none	4		
2a	NEP	2004	4av	none	1		
2a	NEP	2004	4ci	none	1		
2a	NEP	2004	none	none	12		
2a	NEP	2005	4ai	none	1		
2a	NEP	2005	4aii	none	14		
2a	NEP	2005	4aiii	IIA81d	3		
2a	NEP	2005	4aiii	none	1436	267	0,16
2a	NEP	2005	4aiv	none	5		
2a	NEP	2005	none	none	10		
2a	NEP	2006	4ai	none	2		
2a	NEP	2006	4aii	none	1		
2a	NEP	2006	4aiii	IIA81a	179		
2a	NEP	2006	4aiii	IIA81d	1		
2a	NEP	2006	4aiii	IIa81l	48		
2a	NEP	2006	4aiii	none	1003	224	0,18
2a	NEP	2006	4aiv	IIA81a	1		
2a	NEP	2006	4aiv	none	2		
2a	NEP	2006	none	none	9		
2a	NEP	2007	4ai	none	1		
2a	NEP	2007	4aii	IIA81b	95	66	0,41
2a	NEP	2007	4aii	none	4		
2a	NEP	2007	4aiii	IIA81a	178	346	0,66
2a	NEP	2007	4aiii	none	1369	1222	0,47
2a	NEP	2007	4aiv	IIA81a	1		
2a	NEP	2007	4aiv	none	9		
2a	NEP	2007	4av	IIA81a	3		
2a	NEP	2007	4av	none	15		
2a	NEP	2007	none	none	20		
2a	PLE	2003	4ai	none	7		
2a	PLE	2003	4aii	IIA81d	5		
2a	PLE	2003	4aii	none	125		
2a	PLE	2003	4aiii	IIA81d	105		
2a	PLE	2003	4aiii	none	1420	663	0,32
2a	PLE	2003	4aiv	IIA81c	79		
2a	PLE	2003	4aiv	none	83		
2a	PLE	2003	4av	IIA81c	8		
2a	PLE	2003	4av	none	94		
2a	PLE	2003	4ci	none	20		
2a	PLE	2003	4cii	none	98		
2a	PLE	2003	4ciii	none	6		
2a	PLE	2003	4civ	none	2		
2a	PLE	2003	none	none	293		
2a	PLE	2004	4aii	none	11		
2a	PLE	2004	4aiii	IIA81d	10		
2a	PLE	2004	4aiii	none	821	287	0,26
2a	PLE	2004	4aiv	IIA81c	205		

Table 6.3.2.1 continued

2a	PLE	2004	4aiv	IIA81d	1		
2a	PLE	2004	4aiv	none	92		
2a	PLE	2004	4av	none	30		
2a	PLE	2004	4ci	none	22		
2a	PLE	2004	4cii	none	94		
2a	PLE	2004	4ciii	none	10		
2a	PLE	2004	none	none	267		
2a	PLE	2005	4aii	none	3		
2a	PLE	2005	4aiii	IIA81d	1		
2a	PLE	2005	4aiii	none	522	221	0,3
2a	PLE	2005	4aiv	IIA81c	283		
2a	PLE	2005	4aiv	none	99		
2a	PLE	2005	4av	none	11		
2a	PLE	2005	4ci	none	30		
2a	PLE	2005	4cii	none	58		
2a	PLE	2005	4ciii	none	2		
2a	PLE	2005	4civ	none	1		
2a	PLE	2005	4d	none	1		
2a	PLE	2005	none	none	186		
2a	PLE	2006	4ai	none	1		
2a	PLE	2006	4aii	none	1		
2a	PLE	2006	4aiii	IIA81a	76		
2a	PLE	2006	4aiii	IIA81d	8		
2a	PLE	2006	4aiii	IIa81l	23		
2a	PLE	2006	4aiii	none	572	350	0,38
2a	PLE	2006	4aiv	IIA81a	127		
2a	PLE	2006	4aiv	IIA81c	28		
2a	PLE	2006	4aiv	none	225		
2a	PLE	2006	4av	IIA81a	9		
2a	PLE	2006	4av	none	15		
2a	PLE	2006	4ci	none	37		
2a	PLE	2006	4cii	none	97		
2a	PLE	2006	4ciii	none	4		
2a	PLE	2006	4d	none	2		
2a	PLE	2006	none	none	214		
2a	PLE	2007	4aii	IIA81b	1	27	0,98
2a	PLE	2007	4aii	none	1		
2a	PLE	2007	4aiii	IIA81a	68	155	0,7
2a	PLE	2007	4aiii	none	523	1720	0,77
2a	PLE	2007	4aiv	IIA81a	1		
2a	PLE	2007	4aiv	none	392		
2a	PLE	2007	4av	IIA81a	1		
2a	PLE	2007	4av	none	14		
2a	PLE	2007	4ci	none	16		
2a	PLE	2007	4cii	none	92		
2a	PLE	2007	4ciii	none	2		
2a	PLE	2007	4civ	none	1		
2a	PLE	2007	4d	none	1		

Table 6.3.2.1 continued

2a	PLE	2007	none	none	202		
2a	POK	2003	4aiii	none	58		
2a	POK	2003	4aiv	none	4		
2a	POK	2003	4av	none	1		
2a	POK	2003	4cii	none	1		
2a	POK	2004	4aiii	none	11	4	0,28
2a	POK	2004	4cii	none	2		
2a	POK	2005	4aiii	none	16		
2a	POK	2005	4av	none	1		
2a	POK	2005	none	none	1		
2a	POK	2006	4aiii	none	10		0,01
2a	POK	2006	4aiv	none	1		
2a	POK	2007	4aiii	IIA81a	15	3	0,16
2a	POK	2007	4aiii	none	9	3	0,23
2a	POK	2007	4av	none	2		
2a	SOL	2003	4aii	IIA81d	1		
2a	SOL	2003	4aii	none	38		
2a	SOL	2003	4aiii	IIA81d	1		
2a	SOL	2003	4aiii	none	85	32	0,28
2a	SOL	2003	4aiv	IIA81c	1		
2a	SOL	2003	4aiv	none	2		
2a	SOL	2003	4av	none	1		
2a	SOL	2003	4ci	none	21		
2a	SOL	2003	4cii	none	13		
2a	SOL	2003	4ciii	none	1		
2a	SOL	2003	4civ	none	1		
2a	SOL	2003	none	none	56		
2a	SOL	2004	4aii	none	12		
2a	SOL	2004	4aiii	none	147	295	0,67
2a	SOL	2004	4aiv	IIA81c	1		
2a	SOL	2004	4aiv	none	2		
2a	SOL	2004	4av	none	1		
2a	SOL	2004	4ci	none	23		
2a	SOL	2004	4cii	none	14		
2a	SOL	2004	4civ	none	1		
2a	SOL	2004	none	none	78		
2a	SOL	2005	4aii	none	3		
2a	SOL	2005	4aiii	none	245	16	0,06
2a	SOL	2005	4aiv	IIA81c	3		
2a	SOL	2005	4aiv	none	8		
2a	SOL	2005	4ci	none	102		
2a	SOL	2005	4cii	none	32		
2a	SOL	2005	4d	none	2		
2a	SOL	2005	none	none	192		
2a	SOL	2006	4aii	IIA81b	1		
2a	SOL	2006	4aii	none	1		
2a	SOL	2006	4aiii	IIA81a	36		
2a	SOL	2006	4aiii	IIa81l	11		
2a	SOL	2006	4aiii	none	217	16	0,07
2a	SOL	2006	4aiv	IIA81a	5		
2a	SOL	2006	4aiv	none	10		
2a	SOL	2006	4av	none	1		
2a	SOL	2006	4ci	none	97		
2a	SOL	2006	4cii	none	34		
2a	SOL	2006	4ciii	none	2		
2a	SOL	2006	4d	none	1		
2a	SOL	2006	none	none	157		
2a	SOL	2007	4aii	IIA81b	1		0,27
2a	SOL	2007	4aiii	IIA81a	8	1	0,06

Table 6.3.2.1 continued

2a	SOL	2007	4aiii	none	208	45	0,18
2a	SOL	2007	4aiv	none	7		
2a	SOL	2007	4av	none	2		
2a	SOL	2007	4ci	none	49		
2a	SOL	2007	4cii	none	26		
2a	SOL	2007	none	none	71		
2a	WHG	2003	4ai	none	1		
2a	WHG	2003	4aii	none	20		
2a	WHG	2003	4aiii	none	17	1293	0,99
2a	WHG	2004	4aii	none	5		
2a	WHG	2004	4aiii	none	28	3661	0,99
2a	WHG	2005	4aii	IIA81b	1		
2a	WHG	2005	4aiii	none	65	313	0,83
2a	WHG	2005	4av	none	1		
2a	WHG	2005	none	none	1		
2a	WHG	2006	4aii	IIA81b	1		
2a	WHG	2006	4aiii	IIA81a	3		
2a	WHG	2006	4aiii	none	66	359	0,85
2a	WHG	2007	4ai	none	213		
2a	WHG	2007	4aii	IIA81b	1	1	0,68
2a	WHG	2007	4aiii	IIA81a	25	135	0,84
2a	WHG	2007	4aiii	none	40	142	0,78
2a	WHG	2007	4av	IIA81a	1		

Table 6.3.2.2. Kattegat: Cod (COD), plaice (PLE) and sole (SOL) landings (L) and discards (D) at ages 1-9 ('000) by derogation 2003-2007

SPECIES	REG_ARE	REG_GEA	SPECON	AGE	2003 L	2003 D	2004 L	2004 D	2005 L	2005 D	2006 L	2006 D	2007 L	2007 D
COD	2a	4ai	none	1										
COD	2a	4ai	none	2	21				2					
COD	2a	4ai	none	3	15		2		2		1			
COD	2a	4ai	none	4	4		1		2					
COD	2a	4ai	none	5	1		1							
COD	2a	4ai	none	6										
COD	2a	4ai	none	7										
COD	2a	4ai	none	8										
COD	2a	4ai	none	9										
COD	2a	4aii	IIA81d	1										
COD	2a	4aii	IIA81d	2	3									
COD	2a	4aii	IIA81d	3	2									
COD	2a	4aii	IIA81d	4										
COD	2a	4aii	IIA81d	5										
COD	2a	4aii	IIA81d	6										
COD	2a	4aii	IIA81d	7										
COD	2a	4aii	IIA81d	8										
COD	2a	4aii	IIA81d	9										
COD	2a	4aii	none	1			1							
COD	2a	4aii	none	2	121		5		2		1			
COD	2a	4aii	none	3	60		18		1		1			
COD	2a	4aii	none	4	13		3		1					
COD	2a	4aii	none	5	3		1							
COD	2a	4aii	none	6										
COD	2a	4aii	none	7										
COD	2a	4aii	none	8										
COD	2a	4aii	none	9										
COD	2a	4aiii	IIA81a	1										
COD	2a	4aiii	IIA81a	2							10			
COD	2a	4aiii	IIA81a	3							31			
COD	2a	4aiii	IIA81a	4							2			
COD	2a	4aiii	IIA81a	5							2			
COD	2a	4aiii	IIA81a	6							1			
COD	2a	4aiii	IIA81a	7										
COD	2a	4aiii	IIA81a	8										
COD	2a	4aiii	IIA81a	9										
COD	2a	4aiii	IIA81d	1										
COD	2a	4aiii	IIA81d	2	5				1					
COD	2a	4aiii	IIA81d	3	2		1		1					
COD	2a	4aiii	IIA81d	4	1		1							
COD	2a	4aiii	IIA81d	5	1		1							
COD	2a	4aiii	IIA81d	6										
COD	2a	4aiii	IIA81d	7										
COD	2a	4aiii	IIA81d	8										
COD	2a	4aiii	IIA81d	9										
COD	2a	4aiii	IIa81l	1										
COD	2a	4aiii	IIa81l	2							3			
COD	2a	4aiii	IIa81l	3							9			
COD	2a	4aiii	IIa81l	4							1			
COD	2a	4aiii	IIa81l	5							1			
COD	2a	4aiii	IIa81l	6										
COD	2a	4aiii	IIa81l	7										
COD	2a	4aiii	IIa81l	8										
COD	2a	4aiii	IIa81l	9										
COD	2a	4aiii	none	1			15	6019	1	479	8	1020		1754
COD	2a	4aiii	none	2	317		145	231	332	943	78	581	41	1065
COD	2a	4aiii	none	3	225		635	104	73	12	307	237	50	199
COD	2a	4aiii	none	4	67		89		103	10	18	10	76	88
COD	2a	4aiii	none	5	23		44		13		21	1	6	4
COD	2a	4aiii	none	6	3		10		5		4		7	1
COD	2a	4aiii	none	7	1		1		1		2		2	
COD	2a	4aiii	none	8			1		1		1			
COD	2a	4aiii	none	9										
COD	2a	4aiv	IIA81a	1										
COD	2a	4aiv	IIA81a	2										
COD	2a	4aiv	IIA81a	3							3			
COD	2a	4aiv	IIA81a	4							1			
COD	2a	4aiv	IIA81a	5							1			

Table 6.3.2.2 continued

COD	2a	4aiv	IIA81a	6					
COD	2a	4aiv	IIA81a	7					
COD	2a	4aiv	IIA81a	8					
COD	2a	4aiv	IIA81a	9					
COD	2a	4aiv	IIA81c	1					
COD	2a	4aiv	IIA81c	2	6	1	3		
COD	2a	4aiv	IIA81c	3	5	5	3		
COD	2a	4aiv	IIA81c	4	2	2	5		
COD	2a	4aiv	IIA81c	5	1	1	1		
COD	2a	4aiv	IIA81c	6					
COD	2a	4aiv	IIA81c	7					
COD	2a	4aiv	IIA81c	8					
COD	2a	4aiv	IIA81c	9					
COD	2a	4aiv	IIA81d	1					
COD	2a	4aiv	IIA81d	2					
COD	2a	4aiv	IIA81d	3		1			
COD	2a	4aiv	IIA81d	4					
COD	2a	4aiv	IIA81d	5					
COD	2a	4aiv	IIA81d	6					
COD	2a	4aiv	IIA81d	7					
COD	2a	4aiv	IIA81d	8					
COD	2a	4aiv	IIA81d	9					
COD	2a	4aiv	none	1					
COD	2a	4aiv	none	2	34	5	11	2	1
COD	2a	4aiv	none	3	18	22	10	9	2
COD	2a	4aiv	none	4	6	5	13	1	7
COD	2a	4aiv	none	5	2	3	2	1	1
COD	2a	4aiv	none	6		1	1		1
COD	2a	4aiv	none	7					
COD	2a	4aiv	none	8					
COD	2a	4aiv	none	9					
COD	2a	4av	IIA81a	1					
COD	2a	4av	IIA81a	2					
COD	2a	4av	IIA81a	3					
COD	2a	4av	IIA81a	4					
COD	2a	4av	IIA81a	5					
COD	2a	4av	IIA81a	6					
COD	2a	4av	IIA81a	7					
COD	2a	4av	IIA81a	8					
COD	2a	4av	IIA81a	9					
COD	2a	4av	IIA81c	1					
COD	2a	4av	IIA81c	2	2				
COD	2a	4av	IIA81c	3	2				
COD	2a	4av	IIA81c	4	1				
COD	2a	4av	IIA81c	5					
COD	2a	4av	IIA81c	6					
COD	2a	4av	IIA81c	7					
COD	2a	4av	IIA81c	8					
COD	2a	4av	IIA81c	9					
COD	2a	4av	IIA81d	1					
COD	2a	4av	IIA81d	2					
COD	2a	4av	IIA81d	3					
COD	2a	4av	IIA81d	4					
COD	2a	4av	IIA81d	5					
COD	2a	4av	IIA81d	6					
COD	2a	4av	IIA81d	7					
COD	2a	4av	IIA81d	8					
COD	2a	4av	IIA81d	9					
COD	2a	4av	none	1					
COD	2a	4av	none	2	31	2	8	3	4
COD	2a	4av	none	3	24	8	1	6	4
COD	2a	4av	none	4	9	2	2		4
COD	2a	4av	none	5	3	1			
COD	2a	4av	none	6					
COD	2a	4av	none	7					
COD	2a	4av	none	8					
COD	2a	4av	none	9					
COD	2a	4ci	none	1					
COD	2a	4ci	none	2	1	1	4	3	2
COD	2a	4ci	none	3	1	4	1	8	2
COD	2a	4ci	none	4	1	1	2	1	2

Table 6.3.2.2 continued

COD	2a	4ci	none	5					
COD	2a	4ci	none	6					
COD	2a	4ci	none	7					
COD	2a	4ci	none	8					
COD	2a	4ci	none	9					
COD	2a	4cii	none	1					
COD	2a	4cii	none	2	18	1	6	2	1
COD	2a	4cii	none	3	17	9	4	17	2
COD	2a	4cii	none	4	6	3	5	3	4
COD	2a	4cii	none	5	2	2	1	2	
COD	2a	4cii	none	6					1
COD	2a	4cii	none	7					
COD	2a	4cii	none	8					
COD	2a	4cii	none	9					
COD	2a	4ciii	none	1					
COD	2a	4ciii	none	2	2				
COD	2a	4ciii	none	3	6	1			
COD	2a	4ciii	none	4	5	1	1		1
COD	2a	4ciii	none	5	3	1			
COD	2a	4ciii	none	6	1				
COD	2a	4ciii	none	7					
COD	2a	4ciii	none	8					
COD	2a	4ciii	none	9					
COD	2a	4civ	none	1					
COD	2a	4civ	none	2					
COD	2a	4civ	none	3		2			
COD	2a	4civ	none	4					
COD	2a	4civ	none	5					
COD	2a	4civ	none	6					
COD	2a	4civ	none	7					
COD	2a	4civ	none	8					
COD	2a	4civ	none	9					
COD	2a	4d	none	1					
COD	2a	4d	none	2					
COD	2a	4d	none	3					
COD	2a	4d	none	4					
COD	2a	4d	none	5					
COD	2a	4d	none	6					
COD	2a	4d	none	7					
COD	2a	4d	none	8					
COD	2a	4d	none	9					
COD	2a	4e	none	1					
COD	2a	4e	none	2	1				
COD	2a	4e	none	3	1	1		1	
COD	2a	4e	none	4	1				
COD	2a	4e	none	5					
COD	2a	4e	none	6					
COD	2a	4e	none	7					
COD	2a	4e	none	8					
COD	2a	4e	none	9					
COD	2a	none	none	1		2			
COD	2a	none	none	2	88	13	38	9	6
COD	2a	none	none	3	69	65	18	40	5
COD	2a	none	none	4	21	16	22	3	9
COD	2a	none	none	5	7	8	2	3	1
COD	2a	none	none	6	1	1	1	1	1
COD	2a	none	none	7					
COD	2a	none	none	8					
COD	2a	none	none	9					
PLE	2a	4ai	none	1					
PLE	2a	4ai	none	2	2				
PLE	2a	4ai	none	3	5	1		1	1
PLE	2a	4ai	none	4	10				
PLE	2a	4ai	none	5	6				
PLE	2a	4ai	none	6	1				
PLE	2a	4ai	none	7					
PLE	2a	4ai	none	8					
PLE	2a	4ai	none	9					
PLE	2a	4aii	IIA81d	1					
PLE	2a	4aii	IIA81d	2	1				

Table 6.3.2.2 continued

PLE	2a	4aii	IIA81d	3	4									
PLE	2a	4aii	IIA81d	4	8									
PLE	2a	4aii	IIA81d	5	5									
PLE	2a	4aii	IIA81d	6										
PLE	2a	4aii	IIA81d	7										
PLE	2a	4aii	IIA81d	8										
PLE	2a	4aii	IIA81d	9										
PLE	2a	4aii	none	1										
PLE	2a	4aii	none	2	31		1		3				1	
PLE	2a	4aii	none	3	97		16		4		1		2	
PLE	2a	4aii	none	4	201		8		3		1		1	
PLE	2a	4aii	none	5	125		12		1					
PLE	2a	4aii	none	6	11		5		1					
PLE	2a	4aii	none	7	3		1							
PLE	2a	4aii	none	8	2									
PLE	2a	4aii	none	9										
PLE	2a	4aiii	IIA81a	1										
PLE	2a	4aiii	IIA81a	2							31			
PLE	2a	4aiii	IIA81a	3							113			
PLE	2a	4aiii	IIA81a	4							52			
PLE	2a	4aiii	IIA81a	5							31			
PLE	2a	4aiii	IIA81a	6							23			
PLE	2a	4aiii	IIA81a	7							18			
PLE	2a	4aiii	IIA81a	8							4			
PLE	2a	4aiii	IIA81a	9										
PLE	2a	4aiii	IIA81d	1										
PLE	2a	4aiii	IIA81d	2	30		1				5			
PLE	2a	4aiii	IIA81d	3	90		16				12			
PLE	2a	4aiii	IIA81d	4	166		6		1		6			
PLE	2a	4aiii	IIA81d	5	105		10				2			
PLE	2a	4aiii	IIA81d	6	9		4		1		2			
PLE	2a	4aiii	IIA81d	7	2						2			
PLE	2a	4aiii	IIA81d	8	1						1			
PLE	2a	4aiii	IIA81d	9										
PLE	2a	4aiii	IIa81l	1										
PLE	2a	4aiii	IIa81l	2							10			
PLE	2a	4aiii	IIa81l	3							34			
PLE	2a	4aiii	IIa81l	4							15			
PLE	2a	4aiii	IIa81l	5							9			
PLE	2a	4aiii	IIa81l	6							7			
PLE	2a	4aiii	IIa81l	7							6			
PLE	2a	4aiii	IIa81l	8							2			
PLE	2a	4aiii	IIa81l	9										
PLE	2a	4aiii	none	1			15	597	11	170		52		1221
PLE	2a	4aiii	none	2	292		115	1460	621	1260	159	975	320	4949
PLE	2a	4aiii	none	3	750		989	725	469	436	906	1849	747	1745
PLE	2a	4aiii	none	4	1440		572	12	387	138	369	148	499	573
PLE	2a	4aiii	none	5	1040		856		151	42	254	31	117	186
PLE	2a	4aiii	none	6	96		381		175	38	134		44	68
PLE	2a	4aiii	none	7	26		57		89	11	107	5	12	33
PLE	2a	4aiii	none	8	15		5		14	4	29	3	13	79
PLE	2a	4aiii	none	9	3		2		2		2		8	36
PLE	2a	4aiv	IIA81a	1										
PLE	2a	4aiv	IIA81a	2							45			
PLE	2a	4aiv	IIA81a	3							221			
PLE	2a	4aiv	IIA81a	4							78			
PLE	2a	4aiv	IIA81a	5							59			
PLE	2a	4aiv	IIA81a	6							44			
PLE	2a	4aiv	IIA81a	7							35			
PLE	2a	4aiv	IIA81a	8							6			
PLE	2a	4aiv	IIA81a	9										
PLE	2a	4aiv	IIA81c	1			10		8					
PLE	2a	4aiv	IIA81c	2	22		44		382		16			
PLE	2a	4aiv	IIA81c	3	57		183		289		39			
PLE	2a	4aiv	IIA81c	4	140		197		197		18			
PLE	2a	4aiv	IIA81c	5	77		226		104		10			
PLE	2a	4aiv	IIA81c	6	6		98		83		9			
PLE	2a	4aiv	IIA81c	7	2		19		45		8			
PLE	2a	4aiv	IIA81c	8	1		1		4		2			
PLE	2a	4aiv	IIA81c	9										
PLE	2a	4aiv	IIA81d	1										
PLE	2a	4aiv	IIA81d	2										
PLE	2a	4aiv	IIA81d	3										

Table 6.3.2.2 continued

PLE	2a	4aiv	IIA81d	4		1			
PLE	2a	4aiv	IIA81d	5					
PLE	2a	4aiv	IIA81d	6					
PLE	2a	4aiv	IIA81d	7					
PLE	2a	4aiv	IIA81d	8					
PLE	2a	4aiv	IIA81d	9					
PLE	2a	4aiv	none	1		3	2		
PLE	2a	4aiv	none	2	22	16	92	90	254
PLE	2a	4aiv	none	3	64	105	97	345	648
PLE	2a	4aiv	none	4	164	88	90	151	392
PLE	2a	4aiv	none	5	66	100	50	97	80
PLE	2a	4aiv	none	6	4	40	44	68	19
PLE	2a	4aiv	none	7	2	7	23	54	5
PLE	2a	4aiv	none	8	1		2	13	3
PLE	2a	4aiv	none	9					2
PLE	2a	4av	IIA81a	1					
PLE	2a	4av	IIA81a	2				7	
PLE	2a	4av	IIA81a	3				14	
PLE	2a	4av	IIA81a	4				7	
PLE	2a	4av	IIA81a	5				3	
PLE	2a	4av	IIA81a	6				3	
PLE	2a	4av	IIA81a	7				2	
PLE	2a	4av	IIA81a	8					
PLE	2a	4av	IIA81a	9					
PLE	2a	4av	IIA81c	1					
PLE	2a	4av	IIA81c	2	2				
PLE	2a	4av	IIA81c	3	5				
PLE	2a	4av	IIA81c	4	17				
PLE	2a	4av	IIA81c	5	4				
PLE	2a	4av	IIA81c	6					
PLE	2a	4av	IIA81c	7					
PLE	2a	4av	IIA81c	8					
PLE	2a	4av	IIA81c	9					
PLE	2a	4av	IIA81d	1					
PLE	2a	4av	IIA81d	2					
PLE	2a	4av	IIA81d	3					
PLE	2a	4av	IIA81d	4					
PLE	2a	4av	IIA81d	5					
PLE	2a	4av	IIA81d	6					
PLE	2a	4av	IIA81d	7					
PLE	2a	4av	IIA81d	8					
PLE	2a	4av	IIA81d	9					
PLE	2a	4av	none	1		1			
PLE	2a	4av	none	2	30	6	3	7	12
PLE	2a	4av	none	3	72	28	8	21	22
PLE	2a	4av	none	4	149	27	12	9	11
PLE	2a	4av	none	5	99	35	8	5	2
PLE	2a	4av	none	6	7	14	7	4	
PLE	2a	4av	none	7	2	3	4	4	
PLE	2a	4av	none	8	1		1	1	
PLE	2a	4av	none	9					
PLE	2a	4ci	none	1		1	1		
PLE	2a	4ci	none	2	5	3	44	14	10
PLE	2a	4ci	none	3	13	28	35	59	24
PLE	2a	4ci	none	4	28	23	17	23	15
PLE	2a	4ci	none	5	23	20	8	18	5
PLE	2a	4ci	none	6	2	8	6	13	1
PLE	2a	4ci	none	7	1	1	4	10	
PLE	2a	4ci	none	8				2	
PLE	2a	4ci	none	9					
PLE	2a	4cii	none	1		5	1		
PLE	2a	4cii	none	2	18	16	55	16	57
PLE	2a	4cii	none	3	62	84	54	146	141
PLE	2a	4cii	none	4	136	91	51	77	90
PLE	2a	4cii	none	5	100	82	24	61	18
PLE	2a	4cii	none	6	12	39	24	27	6
PLE	2a	4cii	none	7	3	8	12	19	2
PLE	2a	4cii	none	8	3	1	2	3	1
PLE	2a	4cii	none	9	1				1
PLE	2a	4ciii	none	1					
PLE	2a	4ciii	none	2	2	1			

Table 6.3.2.2 continued

PLE	2a	4ciii	none	3	5	4	1	5	2
PLE	2a	4ciii	none	4	9	8	2	3	1
PLE	2a	4ciii	none	5	4	7	1	3	1
PLE	2a	4ciii	none	6	1	4	1	2	
PLE	2a	4ciii	none	7		1	1	1	
PLE	2a	4ciii	none	8					
PLE	2a	4ciii	none	9					
PLE	2a	4civ	IIA81f	1					
PLE	2a	4civ	IIA81f	2					
PLE	2a	4civ	IIA81f	3					
PLE	2a	4civ	IIA81f	4					
PLE	2a	4civ	IIA81f	5					
PLE	2a	4civ	IIA81f	6					
PLE	2a	4civ	IIA81f	7					
PLE	2a	4civ	IIA81f	8					
PLE	2a	4civ	IIA81f	9					
PLE	2a	4civ	none	1					
PLE	2a	4civ	none	2					
PLE	2a	4civ	none	3	1	1		1	
PLE	2a	4civ	none	4	4		1		
PLE	2a	4civ	none	5	2				
PLE	2a	4civ	none	6					
PLE	2a	4civ	none	7					
PLE	2a	4civ	none	8					
PLE	2a	4civ	none	9					
PLE	2a	4d	none	1					
PLE	2a	4d	none	2			1	1	1
PLE	2a	4d	none	3			1	3	1
PLE	2a	4d	none	4			1	1	1
PLE	2a	4d	none	5				1	
PLE	2a	4d	none	6				1	
PLE	2a	4d	none	7					
PLE	2a	4d	none	8					
PLE	2a	4d	none	9					
PLE	2a	4e	none	1					
PLE	2a	4e	none	2					
PLE	2a	4e	none	3					
PLE	2a	4e	none	4					
PLE	2a	4e	none	5					
PLE	2a	4e	none	6					
PLE	2a	4e	none	7					
PLE	2a	4e	none	8					
PLE	2a	4e	none	9					
PLE	2a	none	none	1		11	3		
PLE	2a	none	none	2	74	39	168	58	115
PLE	2a	none	none	3	220	316	180	355	332
PLE	2a	none	none	4	451	268	165	135	217
PLE	2a	none	none	5	302	241	83	118	43
PLE	2a	none	none	6	29	101	77	71	13
PLE	2a	none	none	7	7	18	38	59	3
PLE	2a	none	none	8	5	1	5	10	2
PLE	2a	none	none	9	1				1
SOL	2a	4ai	none	1					
SOL	2a	4ai	none	2					
SOL	2a	4ai	none	3					
SOL	2a	4ai	none	4					
SOL	2a	4ai	none	5					
SOL	2a	4ai	none	6					
SOL	2a	4ai	none	7					
SOL	2a	4ai	none	8					
SOL	2a	4ai	none	9					
SOL	2a	4aii	IIA81d	1					
SOL	2a	4aii	IIA81d	2					
SOL	2a	4aii	IIA81d	3					
SOL	2a	4aii	IIA81d	4	1				
SOL	2a	4aii	IIA81d	5					
SOL	2a	4aii	IIA81d	6	1				
SOL	2a	4aii	IIA81d	7	1				
SOL	2a	4aii	IIA81d	8					
SOL	2a	4aii	IIA81d	9					
SOL	2a	4aii	none	1					

Table 6.3.2.2 continued

SOL	2a	4aii	none	2	4	1			
SOL	2a	4aii	none	3	29	5	3	1	
SOL	2a	4aii	none	4	29	10	3	1	
SOL	2a	4aii	none	5	17	8	2	1	
SOL	2a	4aii	none	6	18	4	1		
SOL	2a	4aii	none	7	13	3			
SOL	2a	4aii	none	8	2	2			
SOL	2a	4aii	none	9	3	1			
SOL	2a	4aiii	IIA81a	1					
SOL	2a	4aiii	IIA81a	2				9	
SOL	2a	4aiii	IIA81a	3				18	
SOL	2a	4aiii	IIA81a	4				37	
SOL	2a	4aiii	IIA81a	5				29	
SOL	2a	4aiii	IIA81a	6				21	
SOL	2a	4aiii	IIA81a	7				8	
SOL	2a	4aiii	IIA81a	8				2	
SOL	2a	4aiii	IIA81a	9				1	
SOL	2a	4aiii	IIA81d	1					
SOL	2a	4aiii	IIA81d	2					
SOL	2a	4aiii	IIA81d	3	1				
SOL	2a	4aiii	IIA81d	4	1				
SOL	2a	4aiii	IIA81d	5					
SOL	2a	4aiii	IIA81d	6					
SOL	2a	4aiii	IIA81d	7					
SOL	2a	4aiii	IIA81d	8					
SOL	2a	4aiii	IIA81d	9					
SOL	2a	4aiii	IIa81l	1					
SOL	2a	4aiii	IIa81l	2				4	
SOL	2a	4aiii	IIa81l	3				6	
SOL	2a	4aiii	IIa81l	4				11	
SOL	2a	4aiii	IIa81l	5				9	
SOL	2a	4aiii	IIa81l	6				6	
SOL	2a	4aiii	IIa81l	7				2	
SOL	2a	4aiii	IIa81l	8					
SOL	2a	4aiii	IIa81l	9					
SOL	2a	4aiii	none	1				1	22
SOL	2a	4aiii	none	2	7	30	51	44	153
SOL	2a	4aiii	none	3	38	78	277	104	161
SOL	2a	4aiii	none	4	35	96	261	227	107
SOL	2a	4aiii	none	5	16	40	152	173	187
SOL	2a	4aiii	none	6	15	21	81	123	63
SOL	2a	4aiii	none	7	8	15	25	48	27
SOL	2a	4aiii	none	8	1	7	16	15	18
SOL	2a	4aiii	none	9	2	4	11	7	14
SOL	2a	4aiv	IIA81a	1					
SOL	2a	4aiv	IIA81a	2				1	
SOL	2a	4aiv	IIA81a	3				4	
SOL	2a	4aiv	IIA81a	4				6	
SOL	2a	4aiv	IIA81a	5				5	
SOL	2a	4aiv	IIA81a	6				3	
SOL	2a	4aiv	IIA81a	7				1	
SOL	2a	4aiv	IIA81a	8				1	
SOL	2a	4aiv	IIA81a	9					
SOL	2a	4aiv	IIA81c	1					
SOL	2a	4aiv	IIA81c	2			1		
SOL	2a	4aiv	IIA81c	3	1	1	3		
SOL	2a	4aiv	IIA81c	4	1	1	4		
SOL	2a	4aiv	IIA81c	5	1	1	2		
SOL	2a	4aiv	IIA81c	6	1		1		
SOL	2a	4aiv	IIA81c	7	1				
SOL	2a	4aiv	IIA81c	8					
SOL	2a	4aiv	IIA81c	9					
SOL	2a	4aiv	none	1					
SOL	2a	4aiv	none	2			2	2	3
SOL	2a	4aiv	none	3	2	2	9	5	4
SOL	2a	4aiv	none	4	2	3	9	11	4
SOL	2a	4aiv	none	5	1	2	5	9	7
SOL	2a	4aiv	none	6	1	1	3	6	3
SOL	2a	4aiv	none	7	1		1	2	1
SOL	2a	4aiv	none	8			1	1	1
SOL	2a	4aiv	none	9					

Table 6.3.2.2 continued

SOL	2a	4av	IIA81c	1					
SOL	2a	4av	IIA81c	2					
SOL	2a	4av	IIA81c	3					
SOL	2a	4av	IIA81c	4					
SOL	2a	4av	IIA81c	5					
SOL	2a	4av	IIA81c	6					
SOL	2a	4av	IIA81c	7					
SOL	2a	4av	IIA81c	8					
SOL	2a	4av	IIA81c	9					
SOL	2a	4av	none	1					
SOL	2a	4av	none	2					2
SOL	2a	4av	none	3	1	1	1	1	2
SOL	2a	4av	none	4	1	1	1	1	1
SOL	2a	4av	none	5	1	1		1	2
SOL	2a	4av	none	6	1				
SOL	2a	4av	none	7					
SOL	2a	4av	none	8					
SOL	2a	4av	none	9					
SOL	2a	4ci	none	1				1	2
SOL	2a	4ci	none	2	4	7	36	19	22
SOL	2a	4ci	none	3	29	27	139	54	22
SOL	2a	4ci	none	4	27	30	137	111	19
SOL	2a	4ci	none	5	9	15	62	88	29
SOL	2a	4ci	none	6	14	8	26	55	12
SOL	2a	4ci	none	7	5	5	8	15	4
SOL	2a	4ci	none	8		3	6	8	2
SOL	2a	4ci	none	9	1	1	2	2	2
SOL	2a	4cii	none	1					1
SOL	2a	4cii	none	2	1	2	6	4	8
SOL	2a	4cii	none	3	11	11	31	16	10
SOL	2a	4cii	none	4	12	15	39	36	12
SOL	2a	4cii	none	5	6	9	20	31	20
SOL	2a	4cii	none	6	7	4	10	22	11
SOL	2a	4cii	none	7	5	3	3	7	5
SOL	2a	4cii	none	8	1	2	2	4	3
SOL	2a	4cii	none	9	1	1	1	1	1
SOL	2a	4ciii	none	1					
SOL	2a	4ciii	none	2					
SOL	2a	4ciii	none	3	1		1	1	
SOL	2a	4ciii	none	4	1		1	1	
SOL	2a	4ciii	none	5				2	
SOL	2a	4ciii	none	6				1	
SOL	2a	4ciii	none	7					
SOL	2a	4ciii	none	8					
SOL	2a	4ciii	none	9					
SOL	2a	4civ	IIA81f	1					
SOL	2a	4civ	IIA81f	2					
SOL	2a	4civ	IIA81f	3					
SOL	2a	4civ	IIA81f	4					
SOL	2a	4civ	IIA81f	5					
SOL	2a	4civ	IIA81f	6					
SOL	2a	4civ	IIA81f	7					
SOL	2a	4civ	IIA81f	8					
SOL	2a	4civ	IIA81f	9					
SOL	2a	4civ	none	1					
SOL	2a	4civ	none	2					
SOL	2a	4civ	none	3	1	1			
SOL	2a	4civ	none	4	1	1	1		
SOL	2a	4civ	none	5	1				
SOL	2a	4civ	none	6	1				
SOL	2a	4civ	none	7	1				
SOL	2a	4civ	none	8					
SOL	2a	4civ	none	9					
SOL	2a	4d	none	1					
SOL	2a	4d	none	2			1		
SOL	2a	4d	none	3			3		
SOL	2a	4d	none	4			3	1	
SOL	2a	4d	none	5			1	1	
SOL	2a	4d	none	6				1	
SOL	2a	4d	none	7					
SOL	2a	4d	none	8					

Table 6.3.2.2 continued

SOL	2a	4d	none	9					
SOL	2a	4e	none	1					
SOL	2a	4e	none	2					
SOL	2a	4e	none	3					
SOL	2a	4e	none	4					
SOL	2a	4e	none	5					
SOL	2a	4e	none	6					
SOL	2a	4e	none	7					
SOL	2a	4e	none	8					
SOL	2a	4e	none	9					
SOL	2a	none	none	1					2
SOL	2a	none	none	2	5	13	43	23	24
SOL	2a	none	none	3	59	69	191	98	34
SOL	2a	none	none	4	63	89	249	188	42
SOL	2a	none	none	5	25	48	120	154	64
SOL	2a	none	none	6	33	27	53	99	38
SOL	2a	none	none	7	15	18	15	30	15
SOL	2a	none	none	8	3	10	14	17	8
SOL	2a	none	none	9	5	5	6	5	5

6.3.3. Trend in catch estimates in weight and numbers at age by derogation in management area 2b: Skagerrak, North Sea (incl. 2EU), and Eastern Channel

Estimated landings and discards of cod, haddock, whiting, anglerfish, saithe, hake, *Nephrops*, plaice and sole by gear category, special condition and, in some cases also sub-area (e.g. 2b1), are given in Table 6.3.3.1. Data on age compositions of landings and discards of cod, plaice and sole are given in Table 6.3.3.2. Since the availability of discard information for some species and from some countries contributing landings information to the dataset, care is required in the use of these data to draw firm conclusions about catch composition. For the same reason it was decided that the numerous figures describing these data would not be included in this report.

The wide range of gear categories in use, and special conditions that apply across part or all of the overall area make it difficult to summarise recent catches in terms of coherent fisheries. For instance, in the case of regulated gear 4aii (otter trawls with 70-89mm mesh) the catch data from vessels that do not qualify for any special conditions are given separately for areas 2b1 (Skagerrak), 2b2 (North Sea) and 2b3 (Eastern Channel). However, for vessels using that gear that qualify for special condition IIA81d (i.e. a track record of catching less than 5% cod, plaice or sole in 2002), the catch data are summarised for the combined area. Even within the North Sea this gear is used in two separate fisheries; a UK fishery for *Nephrops* in the Central and Northern North Sea, and a French fishery for whiting in the Southern North Sea. For this reason, only the most important gear categories are considered here. Full information on all gear categories is contained in the relevant tables.

Gear category 4av, otter trawls with≥120mm mesh, corresponds to the directed whitefish fishery, with the landings consisting mostly of haddock, saithe, cod, whiting, anglerfish and plaice. This gear is also used in a directed saithe fishery by vessels fishing under special condition IIA81d. This fishery also takes some haddock, but has relatively little bycatch of other roundfish species. Significant landings of saithe are also made by vessels fishing with gear 4aiv (otter trawls, 100-119mm mesh) fishing under special condition IIA81d.

The use of otter trawls with mesh sizes of 90–99 mm (gear 4aiii) is mostly associated with Danish and Swedish vessels fishing in the Skaggerak, and, to a lesser extent, the eastern North Sea. While some other vessels, particularly in the UK *Nephrops* fisheries, also use this gear, Danish and Swedish vessels in the Skagerrak account for most cod landings taken by this gear, which also takes most other demersal species in a mixed fishery.

The fishery using otter trawl mesh sizes of 70-89mm can be broadly categorised as a whiting fishery in the southern North Sea and Eastern Channel and a *Nephrops* fishery in the central and northern North Sea.

Beam trawlers using mesh sizes of 80-89mm (gear 4bi) take the large majority of the catches of plaice and sole. These vessels also land some cod and discard substantial quantities of plaice and whiting.

Gillnetters can use a variety of mesh sizes to target different species. Based on the information summarised here, mesh sizes of 109mm or less (4ci) are used to target sole, whereas mesh sizes of 110-149mm (4cii) and 150-219mm (4ciii) catch mostly cod and plaice. The gillnet fisheries for cod and plaice are rather distinct from each other, so the classification by mesh size is a little artificial in this case. The larger gillnet mesh sizes (4civ) are used to target Turbot & Lumpsucker, though of the species considered here, anglerfish are the main species caught. There are some catches of sole by trammel nets in the North Sea and eastern channel. Most of these catches are made by vessels fishing under special condition IIA81g which requires vessels to be absent from port for no more than 24 hours at a time.

A common feature of cod sensitive mobile gears is the indication of increased discards of 1 year old cod in 2006 and 2 year old cod n 2007 (year class 2005) in the management area 2b.

Table 6.3.3.1 Skagerrak, North Sea (incl. 2EU), and Eastern Channel: Landings (t), discards (t) and relative discard rates by species and derogation, 2003-2007.

REG_AREA	SPECIES	YEAR	REG_GEAR	SPECON	LANDINGS	DISCARDS	DISC RATE BY GEAR
2b	ANF	2003	4ai	none	61		
2b	ANF	2003	4aii	IIA81d	674		
2b	ANF	2003	4aiv	IIA81c	31		
2b	ANF	2003	4aiv	IIA81d	81		
2b	ANF	2003	4aiv	none	360		
2b	ANF	2003	4av	IIA81c	5		
2b	ANF	2003	4av	IIA81d	145		
2b	ANF	2003	4av	none	5021		
2b	ANF	2003	4ci	none	7		
2b	ANF	2003	4cii	none	10		
2b	ANF	2003	4ciii	none	27		
2b	ANF	2003	4civ	none	472		
2b	ANF	2003	4e	none	1		
2b	ANF	2003	none	none	25		
2b	ANF	2004	4ai	none	98		
2b	ANF	2004	4aii	IIA81d	592		
2b	ANF	2004	4aiv	IIA81c	28		
2b	ANF	2004	4aiv	IIA81d	95		
2b	ANF	2004	4aiv	none	187		
2b	ANF	2004	4av	IIA81c	11		
2b	ANF	2004	4av	IIA81d	174		
2b	ANF	2004	4av	none	5073		
2b	ANF	2004	4ci	none	7		
2b	ANF	2004	4cii	none	11		
2b	ANF	2004	4ciii	none	27		
2b	ANF	2004	4civ	none	542		
2b	ANF	2004	none	none	25		
2b	ANF	2005	4ai	none	26		
2b	ANF	2005	4aii	IIA81d	508		
2b	ANF	2005	4aiv	IIA81c	29		
2b	ANF	2005	4aiv	IIA81d	61		
2b	ANF	2005	4aiv	none	378		
2b	ANF	2005	4av	IIA81c	14		
2b	ANF	2005	4av	IIA81d	242		
2b	ANF	2005	4av	none	6431		
2b	ANF	2005	4ci	none	1		
2b	ANF	2005	4cii	none	13		
2b	ANF	2005	4ciii	none	14		
2b	ANF	2005	4civ	none	445		
2b	ANF	2005	none	none	12		
2b	ANF	2006	4ai	none	12		
2b	ANF	2006	4aii	IIA81d	485		
2b	ANF	2006	4aiv	IIA81c	10		
2b	ANF	2006	4aiv	IIA81d	65		
2b	ANF	2006	4aiv	none	398		
2b	ANF	2006	4av	IIA81c	3		
2b	ANF	2006	4av	IIA81d	282		
2b	ANF	2006	4av	none	6215		
2b	ANF	2006	4cii	none	8		
2b	ANF	2006	4ciii	none	12		
2b	ANF	2006	4civ	none	545		
2b	ANF	2006	4e	none	1		
2b	ANF	2006	none	none	12		
2b	ANF	2007	4ai	none	11		
2b	ANF	2007	4aii	IIA81d	399		
2b	ANF	2007	4aiv	IIA81c	50		
2b	ANF	2007	4aiv	IIA81d	104		
2b	ANF	2007	4aiv	none	712		
2b	ANF	2007	4av	IIA81c	5		
2b	ANF	2007	4av	IIA81d	204		

Table 6.3.3.1 continued

2b	ANF	2007	4av	none	6421		
2b	ANF	2007	4cii	none	12		
2b	ANF	2007	4ciii	none	5		
2b	ANF	2007	4civ	none	356		
2b	ANF	2007	4d	none	1		
2b	ANF	2007	none	none	142		
2b	COD	2003	4ai	none	36		
2b	COD	2003	4aii	IIA81d	565	469	0.45
2b	COD	2003	4aiv	IIA81c	61	2	0.03
2b	COD	2003	4aiv	IIA81d	86	6	0.06
2b	COD	2003	4aiv	none	368	21	0.05
2b	COD	2003	4av	IIA81c	52	7	0.12
2b	COD	2003	4av	IIA81d	363	33	0.08
2b	COD	2003	4av	none	10985	962	0.08
2b	COD	2003	4ci	none	150		
2b	COD	2003	4cii	none	1277		
2b	COD	2003	4ciii	none	2101	4	
2b	COD	2003	4civ	none	18		
2b	COD	2003	4d	none	62		
2b	COD	2003	4e	none	226		
2b	COD	2003	none	none	1221		
2b	COD	2004	4ai	none	18		0.01
2b	COD	2004	4aii	IIA81d	396	165	0.29
2b	COD	2004	4aiv	IIA81c	58	3	0.05
2b	COD	2004	4aiv	IIA81d	46	3	0.06
2b	COD	2004	4aiv	none	382	59	0.13
2b	COD	2004	4av	IIA81c	62	1	0.02
2b	COD	2004	4av	IIA81d	348	20	0.05
2b	COD	2004	4av	none	9857	1048	0.1
2b	COD	2004	4ci	none	137		
2b	COD	2004	4cii	none	1511	1	
2b	COD	2004	4ciii	none	2635		
2b	COD	2004	4civ	none	38		
2b	COD	2004	4d	none	28		
2b	COD	2004	4e	none	126		
2b	COD	2004	none	none	1412		
2b	COD	2005	4ai	none	19		
2b	COD	2005	4aii	IIA81d	333	207	0.38
2b	COD	2005	4aiv	IIA81c	101	13	0.11
2b	COD	2005	4aiv	IIA81d	60	5	0.08
2b	COD	2005	4aiv	none	827	114	0.12
2b	COD	2005	4av	IIA81c	79		
2b	COD	2005	4av	IIA81d	438	18	0.04
2b	COD	2005	4av	none	10787	1221	0.1
2b	COD	2005	4ci	none	135		
2b	COD	2005	4cii	none	1656	3	
2b	COD	2005	4ciii	none	2475		
2b	COD	2005	4civ	none	44		
2b	COD	2005	4d	none	83		
2b	COD	2005	4e	none	135		
2b	COD	2005	none	none	1089	129	0.11
2b	COD	2006	4ai	none	8		
2b	COD	2006	4aii	IIA81d	335	372	0.53
2b	COD	2006	4aiv	IIA81c	40	10	0.19
2b	COD	2006	4aiv	IIA81d	66	15	0.19
2b	COD	2006	4aiv	none	558	70	0.11
2b	COD	2006	4av	IIA81c	6		0.01
2b	COD	2006	4av	IIA81d	455	26	0.05
2b	COD	2006	4av	none	10210	1668	0.14
2b	COD	2006	4ci	none	118		
2b	COD	2006	4cii	none	1702		

Table 6.3.3.1 continued

2b	COD	2006 4ciii	none	2138		
2b	COD	2006 4civ	none	21		
2b	COD	2006 4d	none	111		
2b	COD	2006 4e	none	253		
2b	COD	2006 none	none	1042		
2b	COD	2007 4ai	none	5		
2b	COD	2007 4aii	IIA81b	1	13	0.95
2b	COD	2007 4aii	IIA81d	363	1217	0.77
2b	COD	2007 4aiv	IIA81c	25	12	0.32
2b	COD	2007 4aiv	IIA81d	107	64	0.38
2b	COD	2007 4aiv	none	777	411	0.35
2b	COD	2007 4av	IIA81c	23	1	0.03
2b	COD	2007 4av	IIA81d	350	158	0.31
2b	COD	2007 4av	none	9850	5998	0.38
2b	COD	2007 4ci	none	50		
2b	COD	2007 4cii	none	1105		
2b	COD	2007 4ciii	none	1667		
2b	COD	2007 4civ	none	26		
2b	COD	2007 4d	none	91		
2b	COD	2007 4e	none	192		
2b	COD	2007 none	none	604	61	0.09
2b	HAD	2003 4ai	none	73	1	0.01
2b	HAD	2003 4aii	IIA81d	1729	1955	0.53
2b	HAD	2003 4aiv	IIA81c	70	62	0.47
2b	HAD	2003 4aiv	IIA81d	1573	905	0.37
2b	HAD	2003 4aiv	none	1082	962	0.47
2b	HAD	2003 4av	IIA81c	65	11	0.15
2b	HAD	2003 4av	IIA81d	3077	1644	0.35
2b	HAD	2003 4av	none	29257	15573	0.35
2b	HAD	2003 4ci	none	7		
2b	HAD	2003 4cii	none	145		
2b	HAD	2003 4ciii	none	88	20	0.19
2b	HAD	2003 4e	none	77		
2b	HAD	2003 none	none	86		
2b	HAD	2004 4ai	none	52	1	0.01
2b	HAD	2004 4aii	IIA81d	1341	919	0.41
2b	HAD	2004 4aiv	IIA81c	69	3	0.04
2b	HAD	2004 4aiv	IIA81d	756	153	0.17
2b	HAD	2004 4aiv	none	520	115	0.18
2b	HAD	2004 4av	IIA81c	165	19	0.1
2b	HAD	2004 4av	IIA81d	5587	1531	0.22
2b	HAD	2004 4av	none	33246	7730	0.19
2b	HAD	2004 4ci	none	1		
2b	HAD	2004 4cii	none	127		
2b	HAD	2004 4ciii	none	38		
2b	HAD	2004 4civ	none	1		
2b	HAD	2004 4e	none	21		
2b	HAD	2004 none	none	28		
2b	HAD	2005 4ai	none	18	1	0.07
2b	HAD	2005 4aii	IIA81d	1247	688	0.36
2b	HAD	2005 4aiv	IIA81c	35	2	0.06
2b	HAD	2005 4aiv	IIA81d	509	43	0.08
2b	HAD	2005 4aiv	none	375	29	0.07
2b	HAD	2005 4av	IIA81c	352	16	0.04
2b	HAD	2005 4av	IIA81d	4199	509	0.11
2b	HAD	2005 4av	none	35490	3203	0.08
2b	HAD	2005 4cii	none	81		
2b	HAD	2005 4ciii	none	18		
2b	HAD	2005 4e	none	25		
2b	HAD	2005 none	none	38	6	0.13
2b	HAD	2006 4ai	none	21		

Table 6.3.3.1 continued

2b	HAD	2006	4aii	IIA81b	1	1	0.36
2b	HAD	2006	4aii	IIA81d	878	2173	0.71
2b	HAD	2006	4aiv	IIA81c	15		0.02
2b	HAD	2006	4aiv	IIA81d	487	33	0.06
2b	HAD	2006	4aiv	none	376	68	0.15
2b	HAD	2006	4av	IIA81c	130		
2b	HAD	2006	4av	IIA81d	2470	982	0.28
2b	HAD	2006	4av	IIA81h	1		
2b	HAD	2006	4av	none	27898	5903	0.17
2b	HAD	2006	4cii	none	64		
2b	HAD	2006	4ciii	none	17		
2b	HAD	2006	4e	none	66		
2b	HAD	2006	none	none	115		
2b	HAD	2007	4ai	none	5		
2b	HAD	2007	4aii	IIA81d	747	4218	0.85
2b	HAD	2007	4aiv	IIA81c	32	22	0.41
2b	HAD	2007	4aiv	IIA81d	390	375	0.49
2b	HAD	2007	4aiv	none	626	353	0.36
2b	HAD	2007	4av	IIA81c	228	6	0.03
2b	HAD	2007	4av	IIA81d	1618	1689	0.51
2b	HAD	2007	4av	none	23614	13815	0.37
2b	HAD	2007	4cii	none	52		
2b	HAD	2007	4ciii	none	5		
2b	HAD	2007	4e	none	12		
2b	HAD	2007	none	none	34	25	0.43
2b	HKE	2003	4ai	none	5		
2b	HKE	2003	4aii	IIA81d	6		
2b	HKE	2003	4aiv	IIA81c	14		
2b	HKE	2003	4aiv	IIA81d	15		
2b	HKE	2003	4aiv	none	17		
2b	HKE	2003	4av	IIA81c	5		
2b	HKE	2003	4av	IIA81d	10		
2b	HKE	2003	4av	none	628	9	0.01
2b	HKE	2003	4ci	none	3		
2b	HKE	2003	4cii	none	443		
2b	HKE	2003	4ciii	none	64		
2b	HKE	2003	4civ	none	1		
2b	HKE	2003	none	none	32		
2b	HKE	2004	4ai	none	3		
2b	HKE	2004	4aii	IIA81d	10		
2b	HKE	2004	4aiv	IIA81c	15		
2b	HKE	2004	4aiv	IIA81d	84		
2b	HKE	2004	4aiv	none	27		
2b	HKE	2004	4av	IIA81c	7		
2b	HKE	2004	4av	IIA81d	33	1	0.02
2b	HKE	2004	4av	none	734	18	0.02
2b	HKE	2004	4ci	none	2		
2b	HKE	2004	4cii	none	433		
2b	HKE	2004	4ciii	none	45		
2b	HKE	2004	4civ	none	1		
2b	HKE	2004	none	none	42		
2b	HKE	2005	4ai	none	3		
2b	HKE	2005	4aii	IIA81d	14		
2b	HKE	2005	4aiv	IIA81c	16		
2b	HKE	2005	4aiv	IIA81d	165		
2b	HKE	2005	4aiv	none	53		
2b	HKE	2005	4av	IIA81c	6		
2b	HKE	2005	4av	IIA81d	33		
2b	HKE	2005	4av	none	903	5	0.01
2b	HKE	2005	4ci	none	1		
2b	HKE	2005	4cii	none	512		

Table 6.3.3.1 continued

2b	HKE	2005	4ciii	none	31		
2b	HKE	2005	4civ	none	1		
2b	HKE	2005	4d	none	1		
2b	HKE	2005	none	none	19		
2b	HKE	2006	4ai	none	1		
2b	HKE	2006	4aii	IIA81d	28		
2b	HKE	2006	4aiv	IIA81c	14		
2b	HKE	2006	4aiv	IIA81d	151		
2b	HKE	2006	4aiv	none	48		
2b	HKE	2006	4av	IIA81c	1		
2b	HKE	2006	4av	IIA81d	45		
2b	HKE	2006	4av	none	1202		
2b	HKE	2006	4ci	none	1		
2b	HKE	2006	4cii	none	559		
2b	HKE	2006	4ciii	none	55		
2b	HKE	2006	4civ	none	1		
2b	HKE	2006	none	none	18		
2b	HKE	2007	4ai	none	8		
2b	HKE	2007	4aii	IIA81d	26		
2b	HKE	2007	4aiv	IIA81c	7		
2b	HKE	2007	4aiv	IIA81d	298		
2b	HKE	2007	4aiv	none	55		
2b	HKE	2007	4av	IIA81c	1		
2b	HKE	2007	4av	IIA81d	78		
2b	HKE	2007	4av	none	1635		
2b	HKE	2007	4ci	none	2		
2b	HKE	2007	4cii	none	312		
2b	HKE	2007	4ciii	none	23		
2b	HKE	2007	4civ	none	1		
2b	HKE	2007	none	none	12		
2b	NEP	2003	4ai	none	11		
2b	NEP	2003	4aii	IIA81d	5072		
2b	NEP	2003	4aiv	IIA81c	27		
2b	NEP	2003	4aiv	IIA81d	35		
2b	NEP	2003	4aiv	none	289		
2b	NEP	2003	4av	IIA81c	10		
2b	NEP	2003	4av	IIA81d	63		
2b	NEP	2003	4av	none	1315		
2b	NEP	2003	4ci	none	1		
2b	NEP	2003	none	none	237		
2b	NEP	2004	4ai	none	1		
2b	NEP	2004	4aii	IIA81b	106	113	0.52
2b	NEP	2004	4aii	IIA81d	5848		
2b	NEP	2004	4aiv	IIA81c	32		
2b	NEP	2004	4aiv	IIA81d	82		
2b	NEP	2004	4aiv	none	170		
2b	NEP	2004	4av	IIA81c	10		
2b	NEP	2004	4av	IIA81d	37		
2b	NEP	2004	4av	none	1010		
2b	NEP	2004	none	none	226		
2b	NEP	2005	4ai	none	5		
2b	NEP	2005	4aii	IIA81b	249	402	0.62
2b	NEP	2005	4aii	IIA81d	6117		
2b	NEP	2005	4aiv	IIA81c	39		
2b	NEP	2005	4aiv	IIA81d	181		
2b	NEP	2005	4aiv	none	340		
2b	NEP	2005	4av	IIA81c	23		
2b	NEP	2005	4av	IIA81d	60		
2b	NEP	2005	4av	none	1487		
2b	NEP	2005	none	none	182		
2b	NEP	2006	4ai	none	4		

Table 6.3.3.1 continued

2b	NEP	2006	4aii	IIA81b	287	364	0.56
2b	NEP	2006	4aii	IIA81d	6464		
2b	NEP	2006	4aiv	IIA81c	18	1	0.05
2b	NEP	2006	4aiv	IIA81d	160		
2b	NEP	2006	4aiv	none	446	25	0.05
2b	NEP	2006	4av	IIA81c	7		
2b	NEP	2006	4av	IIA81d	56		
2b	NEP	2006	4av	none	1355		
2b	NEP	2006	none	none	238		
2b	NEP	2007	4ai	none	11		
2b	NEP	2007	4aii	IIA81b	353	716	0.67
2b	NEP	2007	4aii	IIA81d	6011		
2b	NEP	2007	4aiv	IIA81c	6		
2b	NEP	2007	4aiv	IIA81d	250		
2b	NEP	2007	4aiv	none	596		
2b	NEP	2007	4av	IIA81c	2		
2b	NEP	2007	4av	IIA81d	22		
2b	NEP	2007	4av	none	1002		
2b	NEP	2007	none	none	321		
2b	PLE	2003	4ai	none	31		
2b	PLE	2003	4aii	IIA81d	359	106	0.23
2b	PLE	2003	4aiv	IIA81c	1288	252	0.16
2b	PLE	2003	4aiv	IIA81d	7		
2b	PLE	2003	4aiv	IIA81k	1		
2b	PLE	2003	4aiv	none	1087	165	0.13
2b	PLE	2003	4av	IIA81c	596	497	0.45
2b	PLE	2003	4av	IIA81d	209	73	0.26
2b	PLE	2003	4av	none	3963	2504	0.39
2b	PLE	2003	4ci	none	139	22	0.14
2b	PLE	2003	4cii	none	1568		
2b	PLE	2003	4ciii	none	3086	44	0.01
2b	PLE	2003	4civ	none	8		
2b	PLE	2003	4d	none	64		
2b	PLE	2003	4e	none	2		
2b	PLE	2003	none	none	1099		
2b	PLE	2004	4ai	none	19		
2b	PLE	2004	4aii	IIA81d	322	219	0.41
2b	PLE	2004	4aiv	IIA81c	2138		
2b	PLE	2004	4aiv	IIA81d	2		
2b	PLE	2004	4aiv	none	1379		
2b	PLE	2004	4av	IIA81c	408		
2b	PLE	2004	4av	IIA81d	253	4	0.02
2b	PLE	2004	4av	none	3801	114	0.03
2b	PLE	2004	4ci	none	97	31	0.24
2b	PLE	2004	4cii	none	1249		
2b	PLE	2004	4ciii	none	1722		
2b	PLE	2004	4civ	none	6		
2b	PLE	2004	4d	none	87		
2b	PLE	2004	4e	none	12		
2b	PLE	2004	none	none	938		
2b	PLE	2005	4ai	none	8		
2b	PLE	2005	4aii	IIA81b	8	19	0.7
2b	PLE	2005	4aii	IIA81d	278		
2b	PLE	2005	4aiv	IIA81c	1804		
2b	PLE	2005	4aiv	IIA81d	6		
2b	PLE	2005	4aiv	none	1754		
2b	PLE	2005	4av	IIA81c	291		
2b	PLE	2005	4av	IIA81d	199		
2b	PLE	2005	4av	none	4204		
2b	PLE	2005	4ci	none	131	32	0.2
2b	PLE	2005	4cii	none	1251		

Table 6.3.3.1 continued

2b	PLE	2005	4ciii	none	1553		
2b	PLE	2005	4civ	none	9		
2b	PLE	2005	4d	none	72		
2b	PLE	2005	4e	none	2		
2b	PLE	2005	none	none	755		
2b	PLE	2006	4ai	none	24		
2b	PLE	2006	4aii	IIA81b	5	11	0.69
2b	PLE	2006	4aii	IIA81d	267		
2b	PLE	2006	4aiv	IIA81c	1341	735	0.35
2b	PLE	2006	4aiv	IIA81d	4		
2b	PLE	2006	4aiv	none	3984	1871	0.32
2b	PLE	2006	4av	IIA81c	3		
2b	PLE	2006	4av	IIA81d	158		
2b	PLE	2006	4av	IIA81h	1		
2b	PLE	2006	4av	none	5734		
2b	PLE	2006	4ci	none	78		
2b	PLE	2006	4cii	none	1383		
2b	PLE	2006	4ciii	none	1736		
2b	PLE	2006	4civ	none	3		
2b	PLE	2006	4d	none	61		
2b	PLE	2006	4e	none	5		
2b	PLE	2006	none	none	674		
2b	PLE	2007	4ai	none	7		
2b	PLE	2007	4aii	IIA81b	3	71	0.96
2b	PLE	2007	4aii	IIA81d	276	10	0.04
2b	PLE	2007	4aiv	IIA81c	850	29	0.03
2b	PLE	2007	4aiv	IIA81d	12		
2b	PLE	2007	4aiv	none	3418	129	0.04
2b	PLE	2007	4av	IIA81c	4		
2b	PLE	2007	4av	IIA81d	41	1	0.03
2b	PLE	2007	4av	none	5156	163	0.03
2b	PLE	2007	4ci	none	52		
2b	PLE	2007	4cii	none	1159		
2b	PLE	2007	4ciii	none	428		
2b	PLE	2007	4civ	none	8		
2b	PLE	2007	4d	none	44		
2b	PLE	2007	none	none	806		
2b	POK	2003	4ai	none	352		
2b	POK	2003	4aii	IIA81d	166	123	0.42
2b	POK	2003	4aiv	IIA81c	3		
2b	POK	2003	4aiv	IIA81d	21120	7363	0.26
2b	POK	2003	4aiv	none	568	459	0.45
2b	POK	2003	4av	IIA81c	6		
2b	POK	2003	4av	IIA81d	5655	2726	0.33
2b	POK	2003	4av	none	11434	10925	0.49
2b	POK	2003	4ci	none	4		
2b	POK	2003	4cii	none	53		
2b	POK	2003	4ciii	none	102		
2b	POK	2003	4civ	none	1		
2b	POK	2003	4e	none	18		
2b	POK	2003	none	none	154		
2b	POK	2004	4ai	none	283	9	0.03
2b	POK	2004	4aii	IIA81d	186	250	0.57
2b	POK	2004	4aiv	IIA81c	2	1	0.4
2b	POK	2004	4aiv	IIA81d	15487	4880	0.24
2b	POK	2004	4aiv	none	250	357	0.59
2b	POK	2004	4av	IIA81c	15		
2b	POK	2004	4av	IIA81d	7054	2030	0.22
2b	POK	2004	4av	none	12405	10127	0.45
2b	POK	2004	4ci	none	2		
2b	POK	2004	4cii	none	45		

Table 6.3.3.1 continued

2b	POK	2004	4ciii	none	65		
2b	POK	2004	4civ	none	2		
2b	POK	2004	4d	none	1		
2b	POK	2004	4e	none	20		
2b	POK	2004	none	none	45		
2b	POK	2005	4ai	none	165		
2b	POK	2005	4aii	IIA81d	138	120	0.47
2b	POK	2005	4aiv	IIA81c	1		0.03
2b	POK	2005	4aiv	IIA81d	14043	6577	0.32
2b	POK	2005	4aiv	none	338	259	0.43
2b	POK	2005	4av	IIA81c	48		
2b	POK	2005	4av	IIA81d	7568	2354	0.24
2b	POK	2005	4av	none	16256	6077	0.27
2b	POK	2005	4ci	none	1		
2b	POK	2005	4cii	none	48		
2b	POK	2005	4ciii	none	53		
2b	POK	2005	4civ	none	1		
2b	POK	2005	4e	none	4		
2b	POK	2005	none	none	259	17	0.06
2b	POK	2006	4ai	none	90		
2b	POK	2006	4aii	IIA81b	1		0.35
2b	POK	2006	4aii	IIA81d	73	84	0.53
2b	POK	2006	4aiv	IIA81c	1		0.12
2b	POK	2006	4aiv	IIA81d	18328	4093	0.18
2b	POK	2006	4aiv	none	2263	229	0.09
2b	POK	2006	4av	IIA81d	8526	776	0.08
2b	POK	2006	4av	IIA81h	1		
2b	POK	2006	4av	none	15515	3407	0.18
2b	POK	2006	4ci	none	2		
2b	POK	2006	4cii	none	67		
2b	POK	2006	4ciii	none	37		
2b	POK	2006	4civ	none	1		
2b	POK	2006	4e	none	23		
2b	POK	2006	none	none	117		
2b	POK	2007	4ai	none	50		
2b	POK	2007	4aii	IIA81d	125	75	0.38
2b	POK	2007	4aiv	IIA81c	1		0.13
2b	POK	2007	4aiv	IIA81d	18207	55321	0.75
2b	POK	2007	4aiv	none	2510	1409	0.36
2b	POK	2007	4av	IIA81c	9		
2b	POK	2007	4av	IIA81d	6507	1715	0.21
2b	POK	2007	4av	none	14793	12957	0.47
2b	POK	2007	4ci	none	1		
2b	POK	2007	4cii	none	31		
2b	POK	2007	4ciii	none	24		
2b	POK	2007	4e	none	3		
2b	POK	2007	none	none	25	2	0.06
2b	SOL	2003	4ai	none	3		
2b	SOL	2003	4aii	IIA81d	18		0.01
2b	SOL	2003	4aiv	IIA81c	4		
2b	SOL	2003	4aiv	none	6		
2b	SOL	2003	4av	IIA81c	2		
2b	SOL	2003	4av	IIA81d	3		
2b	SOL	2003	4av	none	34		
2b	SOL	2003	4ci	none	361		
2b	SOL	2003	4cii	none	58		
2b	SOL	2003	4ciii	none	18		
2b	SOL	2003	4d	none	44		
2b	SOL	2003	none	none	620		
2b	SOL	2004	4ai	none	1		
2b	SOL	2004	4aii	IIA81d	16	4	0.22

Table 6.3.3.1 continued

2b	SOL	2004	4aiv	IIA81c	10		
2b	SOL	2004	4aiv	none	14		
2b	SOL	2004	4av	IIA81c	3		
2b	SOL	2004	4av	IIA81d	3		
2b	SOL	2004	4av	none	21		
2b	SOL	2004	4ci	none	322	8	0.02
2b	SOL	2004	4cii	none	60		
2b	SOL	2004	4ciii	none	28		
2b	SOL	2004	4d	none	25		
2b	SOL	2004	none	none	487		
2b	SOL	2005	4ai	none	3		
2b	SOL	2005	4aii	IIA81b	1		0.14
2b	SOL	2005	4aii	IIA81d	21		
2b	SOL	2005	4aiv	IIA81c	2		
2b	SOL	2005	4aiv	none	15		
2b	SOL	2005	4av	IIA81c	1		
2b	SOL	2005	4av	IIA81d	1		
2b	SOL	2005	4av	none	10		
2b	SOL	2005	4ci	none	414	5	0.01
2b	SOL	2005	4cii	none	168		
2b	SOL	2005	4ciii	none	70		
2b	SOL	2005	4d	none	64		
2b	SOL	2005	none	none	212		
2b	SOL	2006	4ai	none	1		
2b	SOL	2006	4aii	IIA81b	1		0.11
2b	SOL	2006	4aii	IIA81d	32		
2b	SOL	2006	4aiv	IIA81c	1		
2b	SOL	2006	4aiv	none	24		
2b	SOL	2006	4av	IIA81c	2		
2b	SOL	2006	4av	IIA81d	1		
2b	SOL	2006	4av	none	41		
2b	SOL	2006	4ci	none	450		
2b	SOL	2006	4cii	none	63		
2b	SOL	2006	4ciii	none	20		
2b	SOL	2006	4d	none	36		
2b	SOL	2006	none	none	144		
2b	SOL	2007	4ai	none	1		
2b	SOL	2007	4aii	IIA81b	2	2	0.47
2b	SOL	2007	4aii	IIA81d	33	25	0.42
2b	SOL	2007	4aiv	IIA81d	1		
2b	SOL	2007	4aiv	none	4		
2b	SOL	2007	4av	IIA81d	1		
2b	SOL	2007	4av	none	7		
2b	SOL	2007	4ci	none	372	32	0.08
2b	SOL	2007	4cii	none	96		
2b	SOL	2007	4ciii	none	14		
2b	SOL	2007	4d	none	24	1	0.04
2b	SOL	2007	none	none	253		
2b	WHG	2003	4ai	none	10		
2b	WHG	2003	4aii	IIA81d	5694	21940	0.79
2b	WHG	2003	4aiv	IIA81c	15	10	0.4
2b	WHG	2003	4aiv	IIA81d	340	182	0.35
2b	WHG	2003	4aiv	none	286	206	0.42
2b	WHG	2003	4av	IIA81c	12	24	0.67
2b	WHG	2003	4av	IIA81d	254	256	0.5
2b	WHG	2003	4av	none	4216	3058	0.42
2b	WHG	2003	4ci	none	1		
2b	WHG	2003	4cii	none	4		
2b	WHG	2003	4ciii	none	1		
2b	WHG	2003	4d	none	8		
2b	WHG	2003	none	none	127		

Table 6.3.3.1 continued

2b	WHG	2004	4ai	none	5	2	0.26
2b	WHG	2004	4aii	IIA81b	1	6	0.89
2b	WHG	2004	4aii	IIA81d	4762	13132	0.73
2b	WHG	2004	4aiv	IIA81c	9	6	0.37
2b	WHG	2004	4aiv	IIA81d	193	95	0.33
2b	WHG	2004	4aiv	none	139	66	0.32
2b	WHG	2004	4av	IIA81c	25	43	0.63
2b	WHG	2004	4av	IIA81d	344	407	0.54
2b	WHG	2004	4av	none	3656	3237	0.47
2b	WHG	2004	4ci	none	2		
2b	WHG	2004	4cii	none	2		
2b	WHG	2004	4ciii	none	1		
2b	WHG	2004	4d	none	3		
2b	WHG	2004	none	none	141		
2b	WHG	2005	4ai	none	6		
2b	WHG	2005	4aii	IIA81b	2	3	0.64
2b	WHG	2005	4aii	IIA81d	4319	9172	0.68
2b	WHG	2005	4aiv	IIA81c	1		0.03
2b	WHG	2005	4aiv	IIA81d	252	77	0.24
2b	WHG	2005	4aiv	none	116	32	0.22
2b	WHG	2005	4av	IIA81c	73	11	0.13
2b	WHG	2005	4av	IIA81d	732	374	0.34
2b	WHG	2005	4av	none	4135	1371	0.25
2b	WHG	2005	4ci	none	1		
2b	WHG	2005	4cii	none	6		
2b	WHG	2005	4ciii	none	1		
2b	WHG	2005	4d	none	13		
2b	WHG	2005	none	none	32	9	0.22
2b	WHG	2006	4ai	none	6		
2b	WHG	2006	4aii	IIA81b	3	4	0.58
2b	WHG	2006	4aii	IIA81d	5265	6911	0.57
2b	WHG	2006	4aiv	IIA81c	58	17	0.22
2b	WHG	2006	4aiv	IIA81d	82	20	0.2
2b	WHG	2006	4aiv	none	276	110	0.28
2b	WHG	2006	4av	IIA81c	63	6	0.08
2b	WHG	2006	4av	IIA81d	950	209	0.18
2b	WHG	2006	4av	none	5931	1126	0.16
2b	WHG	2006	4ci	none	1		
2b	WHG	2006	4cii	none	8		
2b	WHG	2006	4ciii	none	1		
2b	WHG	2006	4d	none	7		
2b	WHG	2006	none	none	38		
2b	WHG	2007	4ai	none	959		
2b	WHG	2007	4aii	IIA81b	2	24	0.93
2b	WHG	2007	4aii	IIA81d	4885	3327	0.41
2b	WHG	2007	4aiv	IIA81c	17	2	0.1
2b	WHG	2007	4aiv	IIA81d	127	32	0.2
2b	WHG	2007	4aiv	none	496	98	0.16
2b	WHG	2007	4av	IIA81c	103	8	0.07
2b	WHG	2007	4av	IIA81d	668	169	0.2
2b	WHG	2007	4av	none	6713	1523	0.18
2b	WHG	2007	4cii	none	12		
2b	WHG	2007	4d	none	4		
2b	WHG	2007	none	none	33	1	0.04
2b1	ANF	2003	4aii	none	13		
2b1	ANF	2003	4aiii	IIA81d	5		
2b1	ANF	2003	4aiii	none	145		
2b1	ANF	2004	4aii	none	3		
2b1	ANF	2004	4aiii	IIA81d	2		
2b1	ANF	2004	4aiii	none	194		
2b1	ANF	2005	4aii	none	1		

Table 6.3.3.1 continued

2b1	ANF	2005	4aiii	IIA81d	8		
2b1	ANF	2005	4aiii	none	133		
2b1	ANF	2006	4aiii	IIA81a	36		
2b1	ANF	2006	4aiii	IIa81l	8		
2b1	ANF	2006	4aiii	none	66		
2b1	ANF	2006	4aiv	IIA81a	3		
2b1	ANF	2006	4av	IIA81a	8		
2b1	ANF	2006	4av	IIA81j	7		
2b1	ANF	2007	4aiii	none	104		
2b1	ANF	2007	none	none	1		
2b1	COD	2003	4aii	none	140		
2b1	COD	2003	4aiii	IIA81d	12		
2b1	COD	2003	4aiii	none	1775	78	0.04
2b1	COD	2004	4aii	none	22	123	0.85
2b1	COD	2004	4aiii	IIA81d	26		
2b1	COD	2004	4aiii	none	1979	938	0.32
2b1	COD	2004	none	none	1		
2b1	COD	2005	4aii	none	7		
2b1	COD	2005	4aiii	IIA81d	29		
2b1	COD	2005	4aiii	none	1626	895	0.35
2b1	COD	2006	4aii	none	2		
2b1	COD	2006	4aiii	IIA81a	302		
2b1	COD	2006	4aiii	IIA81d	21		
2b1	COD	2006	4aiii	IIa81l	27		
2b1	COD	2006	4aiii	none	959	1075	0.53
2b1	COD	2006	4aiv	IIA81a	74		
2b1	COD	2006	4av	IIA81a	20		
2b1	COD	2006	4av	IIA81j	2		
2b1	COD	2007	4aiii	IIA81a	85	142	0.63
2b1	COD	2007	4aiii	none	863	837	0.49
2b1	COD	2007	4av	IIA81a	1		
2b1	HAD	2003	4aii	none	48		
2b1	HAD	2003	4aiii	IIA81d	2		
2b1	HAD	2003	4aiii	none	1132	261	0.19
2b1	HAD	2004	4aii	none	6		
2b1	HAD	2004	4aiii	IIA81d	1		
2b1	HAD	2004	4aiii	none	861	210	0.2
2b1	HAD	2005	4aii	none	1		
2b1	HAD	2005	4aiii	IIA81d	8		
2b1	HAD	2005	4aiii	none	353	70	0.17
2b1	HAD	2006	4aii	none	1		
2b1	HAD	2006	4aiii	IIA81a	143		
2b1	HAD	2006	4aiii	IIA81d	6		
2b1	HAD	2006	4aiii	IIa81l	15		
2b1	HAD	2006	4aiii	none	391	59	0.13
2b1	HAD	2006	4aiv	IIA81a	68		
2b1	HAD	2006	4av	IIA81a	46		
2b1	HAD	2006	4av	IIA81j	66		
2b1	HAD	2007	4aiii	IIA81a	68	42	0.38
2b1	HAD	2007	4aiii	none	548	253	0.32
2b1	HAD	2007	4av	IIA81a	1		
2b1	HKE	2003	4aii	none	22		
2b1	HKE	2003	4aiii	IIA81d	1		
2b1	HKE	2003	4aiii	none	162	13	0.07
2b1	HKE	2004	4aii	none	6		
2b1	HKE	2004	4aiii	IIA81d	1		
2b1	HKE	2004	4aiii	none	292	21	0.07
2b1	HKE	2005	4aii	none	2		
2b1	HKE	2005	4aiii	IIA81d	1		
2b1	HKE	2005	4aiii	none	178	57	0.24
2b1	HKE	2006	4aiii	IIA81a	39		

Table 6.3.3.1 continued

2b1	HKE	2006	4aiii	IIA81d	2		
2b1	HKE	2006	4aiii	IIa81l	3		
2b1	HKE	2006	4aiii	none	113	32	0.22
2b1	HKE	2006	4aiv	IIA81a	10		
2b1	HKE	2006	4av	IIA81a	2		
2b1	HKE	2006	4av	IIA81j	1		
2b1	HKE	2007	4aiii	IIA81a	15	44	0.74
2b1	HKE	2007	4aiii	none	189	209	0.53
2b1	NEP	2003	4aii	none	453		
2b1	NEP	2003	4aiii	IIA81d	8		
2b1	NEP	2003	4aiii	none	1382	837	0.38
2b1	NEP	2004	4aii	none	82		
2b1	NEP	2004	4aiii	IIA81d	16		
2b1	NEP	2004	4aiii	none	1834	733	0.29
2b1	NEP	2005	4aii	none	18		
2b1	NEP	2005	4aiii	IIA81d	22		
2b1	NEP	2005	4aiii	none	1829	590	0.24
2b1	NEP	2006	4aii	none	3		
2b1	NEP	2006	4aiii	IIA81a	315		
2b1	NEP	2006	4aiii	IIA81d	12		
2b1	NEP	2006	4aiii	IIa81l	39		
2b1	NEP	2006	4aiii	none	1317	489	0.27
2b1	NEP	2006	4aiv	IIA81a	32		
2b1	NEP	2006	4av	IIA81a	2		
2b1	NEP	2006	4av	IIA81j	4		
2b1	NEP	2007	4aii	none	1		
2b1	NEP	2007	4aiii	IIA81a	133	180	0.58
2b1	NEP	2007	4aiii	none	1740	2295	0.57
2b1	PLE	2003	4aii	none	62		
2b1	PLE	2003	4aiii	IIA81d	5		
2b1	PLE	2003	4aiii	none	2771	368	0.12
2b1	PLE	2003	none	none	1		
2b1	PLE	2004	4aii	none	31		
2b1	PLE	2004	4aiii	IIA81d	14		
2b1	PLE	2004	4aiii	none	2743	982	0.26
2b1	PLE	2004	none	none	1		
2b1	PLE	2005	4aii	none	5		
2b1	PLE	2005	4aiii	IIA81d	12		
2b1	PLE	2005	4aiii	none	835	539	0.39
2b1	PLE	2006	4aii	none	8		
2b1	PLE	2006	4aiii	IIA81a	150		
2b1	PLE	2006	4aiii	IIA81d	19		
2b1	PLE	2006	4aiii	IIa81l	13		
2b1	PLE	2006	4aiii	none	748	306	0.29
2b1	PLE	2006	4aiv	IIA81a	433		
2b1	PLE	2006	4av	IIA81a	94		
2b1	PLE	2006	4av	IIA81j	9		
2b1	PLE	2007	4aiii	IIA81a	87	81	0.48
2b1	PLE	2007	4aiii	none	538	432	0.45
2b1	POK	2003	4aii	none	130		
2b1	POK	2003	4aiii	IIA81d	27		
2b1	POK	2003	4aiii	none	2727	22	0.01
2b1	POK	2004	4aii	none	21		
2b1	POK	2004	4aiii	IIA81d	18		
2b1	POK	2004	4aiii	none	2822	369	0.12
2b1	POK	2005	4aii	none	1		
2b1	POK	2005	4aiii	IIA81d	72		
2b1	POK	2005	4aiii	none	2897	48	0.02
2b1	POK	2006	4aii	none	11		
2b1	POK	2006	4aiii	IIA81a	975		
2b1	POK	2006	4aiii	IIA81d	66		

Table 6.3.3.1 continued

2b1	POK	2006 4aiii	IIa81l	82		
2b1	POK	2006 4aiii	none	2265	592	0.21
2b1	POK	2006 4aiv	IIA81a	103		
2b1	POK	2006 4av	IIA81a	55		
2b1	POK	2006 4av	IIA81j	39		
2b1	POK	2007 4aii	none	1		
2b1	POK	2007 4aiii	IIA81a	129	21	0.14
2b1	POK	2007 4aiii	none	1933	3704	0.66
2b1	POK	2007 none	none	1		
2b1	SOL	2003 4aii	none	14		
2b1	SOL	2003 4aiii	none	36	2	0.06
2b1	SOL	2004 4aii	none	1		
2b1	SOL	2004 4aiii	IIA81d	3		
2b1	SOL	2004 4aiii	none	51	1	0.03
2b1	SOL	2005 4aiii	IIA81d	1		
2b1	SOL	2005 4aiii	none	65		
2b1	SOL	2006 4aiii	IIA81a	20		
2b1	SOL	2006 4aiii	IIa81l	1		
2b1	SOL	2006 4aiii	none	73	6	0.08
2b1	SOL	2006 4aiv	IIA81a	3		
2b1	SOL	2006 4av	IIA81j	1		
2b1	SOL	2007 4aiii	IIA81a	2		0.18
2b1	SOL	2007 4aiii	none	4		0.09
2b1	WHG	2003 4aii	none	10		
2b1	WHG	2003 4aiii	none	56	262	0.82
2b1	WHG	2004 4aii	none	3		
2b1	WHG	2004 4aiii	none	73	1090	0.94
2b1	WHG	2005 4aiii	none	36	119	0.77
2b1	WHG	2006 4aiii	IIA81a	6		
2b1	WHG	2006 4aiii	none	32	135	0.81
2b1	WHG	2006 4av	IIA81j	1		
2b1	WHG	2007 4aiii	IIA81a	16	201	0.93
2b1	WHG	2007 4aiii	none	36	392	0.92
2b12	ANF	2003 4bi	none	75		
2b12	ANF	2003 4biii	IIA81c	21		
2b12	ANF	2003 4biii	IIA81i	1		
2b12	ANF	2003 4biii	none	4		
2b12	ANF	2003 4biv	IIA81c	97		
2b12	ANF	2003 4biv	IIA81i	10		
2b12	ANF	2003 4biv	none	208		
2b12	ANF	2004 4bi	none	76	2	0.03
2b12	ANF	2004 4biii	IIA81c	19		
2b12	ANF	2004 4biii	none	4		
2b12	ANF	2004 4biv	IIA81c	89		
2b12	ANF	2004 4biv	IIA81i	6		
2b12	ANF	2004 4biv	none	289		
2b12	ANF	2005 4bi	none	88	18	0.17
2b12	ANF	2005 4biii	IIA81c	19		
2b12	ANF	2005 4biii	IIA81i	3		
2b12	ANF	2005 4biii	none	6		
2b12	ANF	2005 4biv	IIA81c	60		
2b12	ANF	2005 4biv	IIA81i	2		
2b12	ANF	2005 4biv	none	294		
2b12	ANF	2006 4bi	none	41	4	0.09
2b12	ANF	2006 4biii	IIA81c	10		
2b12	ANF	2006 4biii	IIA81i	2		
2b12	ANF	2006 4biii	none	3		
2b12	ANF	2006 4biv	IIA81c	9		
2b12	ANF	2006 4biv	IIA81e	1		
2b12	ANF	2006 4biv	IIA81i	3		
2b12	ANF	2006 4biv	none	185	13	0.06

Table 6.3.3.1 continued

2b12	ANF	2007	4bi	none	51	5	0.08
2b12	ANF	2007	4biii	IIA81c	13		
2b12	ANF	2007	4biii	IIA81i	1		
2b12	ANF	2007	4biii	none	3		
2b12	ANF	2007	4biv	IIA81c	11		
2b12	ANF	2007	4biv	IIA81i	3		
2b12	ANF	2007	4biv	none	164		
2b12	COD	2003	4bi	none	3209	129	0.04
2b12	COD	2003	4bii	none	2		
2b12	COD	2003	4biii	IIA81c	42		
2b12	COD	2003	4biii	IIA81i	4		
2b12	COD	2003	4biii	none	11		
2b12	COD	2003	4biv	IIA81c	101		
2b12	COD	2003	4biv	IIA81i	16		
2b12	COD	2003	4biv	none	569		
2b12	COD	2003	4d	IIA81g	72		
2b12	COD	2004	4bi	none	2379	782	0.25
2b12	COD	2004	4bii	none	2		
2b12	COD	2004	4biii	IIA81c	26		
2b12	COD	2004	4biii	IIA81i	3		
2b12	COD	2004	4biii	none	9		
2b12	COD	2004	4biv	IIA81c	136		
2b12	COD	2004	4biv	IIA81i	10		
2b12	COD	2004	4biv	none	1044		
2b12	COD	2004	4d	IIA81g	20		
2b12	COD	2005	4bi	none	2327	587	0.2
2b12	COD	2005	4biii	IIA81c	20		
2b12	COD	2005	4biii	IIA81i	2		
2b12	COD	2005	4biii	none	18		
2b12	COD	2005	4biv	IIA81c	160		
2b12	COD	2005	4biv	IIA81i	4		
2b12	COD	2005	4biv	none	937		
2b12	COD	2005	4d	IIA81g	10		
2b12	COD	2006	4bi	none	2131	441	0.17
2b12	COD	2006	4biii	IIA81c	18		
2b12	COD	2006	4biii	IIA81i	2		
2b12	COD	2006	4biii	none	9		
2b12	COD	2006	4biv	IIA81c	29		
2b12	COD	2006	4biv	IIA81i	13		
2b12	COD	2006	4biv	none	924	323	0.26
2b12	COD	2006	4d	IIA81g	30		
2b12	COD	2007	4bi	none	1961	207	0.1
2b12	COD	2007	4biii	IIA81c	12		
2b12	COD	2007	4biii	IIA81i	3		
2b12	COD	2007	4biii	none	9	2	0.18
2b12	COD	2007	4biv	IIA81c	10		
2b12	COD	2007	4biv	IIA81i	3		
2b12	COD	2007	4biv	none	633		
2b12	COD	2007	4d	IIA81g	56		
2b12	HAD	2003	4bi	none	138		
2b12	HAD	2003	4biii	IIA81c	14	7	0.34
2b12	HAD	2003	4biii	IIA81i	1	1	0.45
2b12	HAD	2003	4biii	none	4		
2b12	HAD	2003	4biv	IIA81c	57		
2b12	HAD	2003	4biv	IIA81i	8		0.02
2b12	HAD	2003	4biv	none	274		
2b12	HAD	2004	4bi	none	135	7	0.05
2b12	HAD	2004	4biii	IIA81c	13		0.01
2b12	HAD	2004	4biii	none	4		
2b12	HAD	2004	4biv	IIA81c	21		
2b12	HAD	2004	4biv	IIA81i	2		

Table 6.3.3.1 continued

2b12	HAD	2004	4biv	none	287		
2b12	HAD	2005	4bi	none	100	29	0.22
2b12	HAD	2005	4biii	IIA81c	3		
2b12	HAD	2005	4biii	none	6		
2b12	HAD	2005	4biv	IIA81c	7		
2b12	HAD	2005	4biv	IIA81i	1		
2b12	HAD	2005	4biv	none	117		
2b12	HAD	2006	4bi	none	30	9	0.23
2b12	HAD	2006	4biii	none	1		
2b12	HAD	2006	4biv	none	77	2	0.02
2b12	HAD	2007	4bi	none	62	13	0.18
2b12	HAD	2007	4biii	IIA81c	1		
2b12	HAD	2007	4biv	IIA81c	2		
2b12	HAD	2007	4biv	none	107		
2b12	HKE	2003	4bi	none	8		
2b12	HKE	2003	4biii	IIA81c	5		
2b12	HKE	2003	4biv	IIA81c	11		
2b12	HKE	2003	4biv	IIA81i	2		
2b12	HKE	2003	4biv	none	35		
2b12	HKE	2004	4bi	none	12		
2b12	HKE	2004	4biii	IIA81c	5		
2b12	HKE	2004	4biii	none	2		
2b12	HKE	2004	4biv	IIA81c	12		
2b12	HKE	2004	4biv	IIA81i	2		
2b12	HKE	2004	4biv	none	61		
2b12	HKE	2005	4bi	none	14	3	0.17
2b12	HKE	2005	4biii	IIA81c	7		
2b12	HKE	2005	4biii	IIA81i	2		
2b12	HKE	2005	4biii	none	2		
2b12	HKE	2005	4biv	IIA81c	12		
2b12	HKE	2005	4biv	IIA81i	2		
2b12	HKE	2005	4biv	none	54		
2b12	HKE	2006	4bi	none	8	8	0.5
2b12	HKE	2006	4biii	IIA81c	3		
2b12	HKE	2006	4biv	IIA81c	7		
2b12	HKE	2006	4biv	IIA81e	1		
2b12	HKE	2006	4biv	IIA81i	3		
2b12	HKE	2006	4biv	none	47		
2b12	HKE	2007	4bi	none	9		
2b12	HKE	2007	4biii	IIA81c	4		
2b12	HKE	2007	4biii	IIA81i	1		
2b12	HKE	2007	4biii	none	1		
2b12	HKE	2007	4biv	IIA81c	3		
2b12	HKE	2007	4biv	IIA81i	1		
2b12	HKE	2007	4biv	none	50		
2b12	NEP	2003	4bi	none	34		
2b12	NEP	2003	4biv	none	3		
2b12	NEP	2004	4bi	none	35		
2b12	NEP	2004	4bii	none	1		
2b12	NEP	2005	4bi	none	71	8	0.1
2b12	NEP	2006	4bi	none	52		
2b12	NEP	2006	4biii	none	1		
2b12	NEP	2007	4bi	none	67		
2b12	PLE	2003	4bi	none	34012	38226	0.53
2b12	PLE	2003	4bii	none	59		
2b12	PLE	2003	4biii	IIA81c	3683	101	0.03
2b12	PLE	2003	4biii	IIA81i	130	6	0.04
2b12	PLE	2003	4biii	none	317		
2b12	PLE	2003	4biv	IIA81c	3890	238	0.06
2b12	PLE	2003	4biv	IIA81e	4		
2b12	PLE	2003	4biv	IIA81i	497	25	0.05

Table 6.3.3.1 continued

2b12	PLE	2003	4biv	none	2903		
2b12	PLE	2003	4d	IIA81g	81		
2b12	PLE	2004	4bi	none	30059	28406	0.49
2b12	PLE	2004	4bii	none	88		
2b12	PLE	2004	4biii	IIA81c	4690		
2b12	PLE	2004	4biii	IIA81i	100		
2b12	PLE	2004	4biii	none	953		
2b12	PLE	2004	4biv	IIA81c	3007		
2b12	PLE	2004	4biv	IIA81i	213		
2b12	PLE	2004	4biv	none	3053		
2b12	PLE	2004	4d	IIA81g	59		
2b12	ple	2005	4bi	none	27491	23093	0.46
2b12	PLE	2005	4bii	none	5		
2b12	PLE	2005	4biii	IIA81c	3386		
2b12	PLE	2005	4biii	IIA81i	467		
2b12	PLE	2005	4biii	none	991		
2b12	PLE	2005	4biv	IIA81c	2709		
2b12	PLE	2005	4biv	IIA81i	244		
2b12	PLE	2005	4biv	none	2247		
2b12	PLE	2005	4d	IIA81g	64		
2b12	PLE	2006	4bi	none	27614	24716	0.47
2b12	PLE	2006	4bii	none	37		
2b12	PLE	2006	4biii	IIA81c	2654		
2b12	PLE	2006	4biii	IIA81i	374		
2b12	PLE	2006	4biii	none	1111		
2b12	PLE	2006	4biv	IIA81c	1702		
2b12	PLE	2006	4biv	IIA81e	465		
2b12	PLE	2006	4biv	IIA81i	630		
2b12	PLE	2006	4biv	none	4938	106	0.02
2b12	PLE	2006	4d	IIA81g	73		
2b12	PLE	2007	4bi	none	24890	20245	0.45
2b12	PLE	2007	4bii	none	6		
2b12	PLE	2007	4biii	IIA81c	2275		
2b12	PLE	2007	4biii	IIA81i	397		
2b12	PLE	2007	4biii	none	970	15	0.02
2b12	PLE	2007	4biv	IIA81c	633		
2b12	PLE	2007	4biv	IIA81i	145		
2b12	PLE	2007	4biv	none	4286		
2b12	PLE	2007	4d	IIA81g	63		
2b12	POK	2003	4bi	none	9		
2b12	POK	2003	4biv	IIA81c	2		
2b12	POK	2003	4biv	IIA81i	2		
2b12	POK	2003	4biv	none	27		
2b12	POK	2004	4bi	none	12		
2b12	POK	2004	4biii	IIA81c	1		
2b12	POK	2004	4biii	IIA81i	5		
2b12	POK	2004	4biv	IIA81c	2		
2b12	POK	2004	4biv	none	13		
2b12	POK	2005	4bi	none	20		
2b12	POK	2005	4biii	IIA81c	1		
2b12	POK	2005	4biv	IIA81c	1		
2b12	POK	2005	4biv	none	8		
2b12	POK	2006	4bi	none	6		
2b12	POK	2006	4biv	none	9		
2b12	POK	2007	4bi	none	10		
2b12	POK	2007	4biv	IIA81c	1		
2b12	POK	2007	4biv	none	9		
2b12	SOL	2003	4bi	none	15724	1700	0.1
2b12	SOL	2003	4bii	none	25		
2b12	SOL	2003	4biii	IIA81c	51		
2b12	SOL	2003	4biii	IIA81i	4		

Table 6.3.3.1 continued

2b12	SOL	2003	4biii	none	2		
2b12	SOL	2003	4biv	IIA81c	54		
2b12	SOL	2003	4biv	IIA81i	7		
2b12	SOL	2003	4biv	none	29		
2b12	SOL	2003	4d	IIA81g	479		
2b12	SOL	2004	4bi	none	16188	2275	0.12
2b12	SOL	2004	4bii	none	9		
2b12	SOL	2004	4biii	IIA81c	38		
2b12	SOL	2004	4biii	IIA81i	3		
2b12	SOL	2004	4biii	none	10		
2b12	SOL	2004	4biv	IIA81c	35		
2b12	SOL	2004	4biv	IIA81i	1		
2b12	SOL	2004	4biv	none	24		
2b12	SOL	2004	4d	IIA81g	406		
2b12	SOL	2005	4bi	none	13786	1202	0.08
2b12	SOL	2005	4bii	none	3		
2b12	SOL	2005	4biii	IIA81c	42		
2b12	SOL	2005	4biii	IIA81i	6		
2b12	SOL	2005	4biii	none	8		
2b12	SOL	2005	4biv	IIA81c	22		
2b12	SOL	2005	4biv	IIA81i	1		
2b12	SOL	2005	4biv	none	13		
2b12	SOL	2005	4d	IIA81g	520		
2b12	SOL	2006	4bi	none	10352	1210	0.1
2b12	SOL	2006	4bii	none	1		
2b12	SOL	2006	4biii	IIA81c	27		
2b12	SOL	2006	4biii	IIA81i	2		
2b12	SOL	2006	4biii	none	7		
2b12	SOL	2006	4biv	IIA81c	10		
2b12	SOL	2006	4biv	IIA81i	3		
2b12	SOL	2006	4biv	none	31		0.01
2b12	SOL	2006	4d	IIA81g	565		
2b12	SOL	2007	4bi	none	12454	744	0.06
2b12	SOL	2007	4biii	IIA81c	24		
2b12	SOL	2007	4biii	IIA81i	2		
2b12	SOL	2007	4biii	none	2		
2b12	SOL	2007	4biv	IIA81c	1		
2b12	SOL	2007	4biv	none	15		
2b12	SOL	2007	4d	IIA81g	458	40	0.08
2b12	WHG	2003	4bi	none	466	4137	0.9
2b12	WHG	2003	4bii	none	1		
2b12	WHG	2003	4biii	IIA81c	1		
2b12	WHG	2003	4biv	IIA81c	1		
2b12	WHG	2003	4biv	none	15		
2b12	WHG	2003	4d	IIA81g	5		
2b12	WHG	2004	4bi	none	1141	16315	0.93
2b12	WHG	2004	4biii	IIA81c	1		
2b12	WHG	2004	4biv	none	5		
2b12	WHG	2004	4d	IIA81g	1		
2b12	WHG	2005	4bi	none	99	238	0.71
2b12	WHG	2005	4biii	IIA81c	1		
2b12	WHG	2005	4biii	none	5		
2b12	WHG	2005	4biv	none	3		
2b12	WHG	2005	4d	IIA81g	1		
2b12	WHG	2006	4bi	none	89	141	0.61
2b12	WHG	2006	4biii	IIA81c	2		
2b12	WHG	2006	4biii	none	1		
2b12	WHG	2006	4biv	none	5	1	0.14
2b12	WHG	2006	4d	IIA81g	3		
2b12	WHG	2007	4bi	none	33	458	0.93
2b12	WHG	2007	4biii	IIA81c	1		

Table 6.3.3.1 continued

2b12	WHG	2007	4biii	none	1		0.01
2b12	WHG	2007	4biv	none	3		
2b12	WHG	2007	4d	IIA81g	1		
2b2	ANF	2003	4aii	IIA81c	27		
2b2	ANF	2003	4aii	none	959		
2b2	ANF	2003	4civ	IIA81f	7		
2b2	ANF	2004	4aii	IIA81c	12		
2b2	ANF	2004	4aii	none	862		
2b2	ANF	2004	4civ	IIA81f	8		
2b2	ANF	2005	4aii	IIA81c	31		
2b2	ANF	2005	4aii	none	1114		
2b2	ANF	2005	4civ	IIA81f	3		
2b2	ANF	2006	4aii	IIA81c	4		
2b2	ANF	2006	4aii	none	1079		
2b2	ANF	2006	4civ	IIA81f	3		
2b2	ANF	2007	4aii	IIA81c	1		
2b2	ANF	2007	4aii	none	934		
2b2	COD	2003	4aii	IIA81c	123	25	0.17
2b2	COD	2003	4aii	none	1184	733	0.38
2b2	COD	2003	4civ	IIA81f	14		
2b2	COD	2004	4aii	IIA81c	88	18	0.17
2b2	COD	2004	4aii	none	771	301	0.28
2b2	COD	2004	4civ	IIA81f	5		
2b2	COD	2005	4aii	IIA81c	72	12	0.14
2b2	COD	2005	4aii	none	859	476	0.36
2b2	COD	2005	4civ	IIA81f	3		
2b2	COD	2006	4aii	IIA81c	25	10	0.29
2b2	COD	2006	4aii	none	764	879	0.54
2b2	COD	2006	4civ	IIA81f	3		
2b2	COD	2007	4aii	IIA81c	28	1	0.04
2b2	COD	2007	4aii	none	813	2708	0.77
2b2	HAD	2003	4aii	IIA81c	55	25	0.31
2b2	HAD	2003	4aii	none	2114	2651	0.56
2b2	HAD	2004	4aii	IIA81c	44	12	0.21
2b2	HAD	2004	4aii	none	2258	1502	0.4
2b2	HAD	2005	4aii	IIA81c	26	6	0.19
2b2	HAD	2005	4aii	none	2851	1546	0.35
2b2	HAD	2006	4aii	IIA81c	15	1	0.05
2b2	HAD	2006	4aii	none	2167	5285	0.71
2b2	HAD	2007	4aii	IIA81c	17	4	0.2
2b2	HAD	2007	4aii	none	1282	6826	0.84
2b2	HKE	2003	4aii	IIA81c	26		
2b2	HKE	2003	4aii	none	31	1	0.04
2b2	HKE	2004	4aii	IIA81c	32		
2b2	HKE	2004	4aii	none	55		
2b2	HKE	2004	4civ	IIA81f	1		
2b2	HKE	2005	4aii	IIA81c	23		
2b2	HKE	2005	4aii	none	56		
2b2	HKE	2006	4aii	IIA81c	2		
2b2	HKE	2006	4aii	none	75		
2b2	HKE	2007	4aii	IIA81c	3		
2b2	HKE	2007	4aii	none	70		
2b2	NEP	2003	4aii	IIA81c	781		
2b2	NEP	2003	4aii	none	5263		
2b2	NEP	2004	4aii	IIA81c	595		
2b2	NEP	2004	4aii	none	6649		
2b2	NEP	2005	4aii	IIA81c	601		
2b2	NEP	2005	4aii	none	8267		
2b2	NEP	2006	4aii	IIA81c	277	15	0.05
2b2	NEP	2006	4aii	none	8717	1514	0.15
2b2	NEP	2007	4aii	IIA81c	278		

Table 6.3.3.1 continued

2b2	NEP	2007	4aii	none	8527		
2b2	PLE	2003	4aii	IIA81c	1035	1279	0.55
2b2	PLE	2003	4aii	none	1290	1697	0.57
2b2	PLE	2003	4civ	IIA81f	5		
2b2	PLE	2004	4aii	IIA81c	755	321	0.3
2b2	PLE	2004	4aii	none	1125	547	0.33
2b2	PLE	2004	4civ	IIA81f	5		
2b2	PLE	2005	4aii	IIA81c	698	230	0.25
2b2	PLE	2005	4aii	none	952	280	0.23
2b2	PLE	2005	4civ	IIA81f	3		
2b2	PLE	2006	4aii	IIA81c	168	199	0.54
2b2	PLE	2006	4aii	none	1254	727	0.37
2b2	PLE	2006	4civ	IIA81f	3		
2b2	PLE	2007	4aii	IIA81c	331		
2b2	PLE	2007	4aii	none	1015		
2b2	POK	2003	4aii	IIA81c	10	6	0.37
2b2	POK	2003	4aii	none	408	329	0.45
2b2	POK	2004	4aii	IIA81c	3	1	0.31
2b2	POK	2004	4aii	none	344	462	0.57
2b2	POK	2005	4aii	IIA81c	2		0.03
2b2	POK	2005	4aii	none	414	370	0.47
2b2	POK	2006	4aii	none	276	374	0.58
2b2	POK	2007	4aii	IIA81c	1		
2b2	POK	2007	4aii	none	451	262	0.37
2b2	SOL	2003	4aii	IIA81c	47	1	0.02
2b2	SOL	2003	4aii	none	99	1	0.01
2b2	SOL	2004	4aii	IIA81c	56	8	0.13
2b2	SOL	2004	4aii	none	57	2	0.04
2b2	SOL	2005	4aii	IIA81c	29		
2b2	SOL	2005	4aii	none	33		
2b2	SOL	2006	4aii	IIA81c	26		0.01
2b2	SOL	2006	4aii	none	27	1	0.02
2b2	SOL	2007	4aii	IIA81c	37	18	0.32
2b2	SOL	2007	4aii	none	36	14	0.28
2b2	WHG	2003	4aii	IIA81c	85	1020	0.92
2b2	WHG	2003	4aii	none	2459	14112	0.85
2b2	WHG	2004	4aii	IIA81c	79	410	0.84
2b2	WHG	2004	4aii	none	1680	5432	0.76
2b2	WHG	2005	4aii	IIA81c	101	343	0.77
2b2	WHG	2005	4aii	none	2019	4417	0.69
2b2	WHG	2006	4aii	IIA81c	121	37	0.23
2b2	WHG	2006	4aii	none	2611	3709	0.59
2b2	WHG	2007	4aii	IIA81c	54	20	0.28
2b23	NEP	2006	4aiii	IIA81d	1171		
2b23	NEP	2006	4aiii	none	2299		
2b23	NEP	2007	4aiii	IIA81d	1622		
2b23	NEP	2007	4aiii	none	2756		
2b23	PLE	2003	4aiii	IIA81d	33		
2b23	PLE	2003	4aiii	none	2589	1148	0.31
2b23	PLE	2003	none	none	5		
2b23	PLE	2004	4aiii	IIA81d	33		
2b23	PLE	2004	4aiii	none	2338	474	0.17
2b23	PLE	2004	none	none	15		
2b23	PLE	2005	4aiii	IIA81d	22		
2b23	PLE	2005	4aiii	none	1485	183	0.11
2b23	PLE	2005	none	none	46		
2b23	PLE	2006	4aiii	IIA81a	15		
2b23	PLE	2006	4aiii	IIA81d	26		
2b23	PLE	2006	4aiii	none	1111		
2b23	PLE	2006	4aiv	IIA81a	33	27	0.45
2b23	PLE	2006	4av	IIA81a	84		

Table 6.3.3.1 continued

2b23	PLE	2006	none	none	34		
2b23	PLE	2007	4aiii	IIA81d	30		
2b23	PLE	2007	4aiii	none	874		
2b23	PLE	2007	none	none	35		
2b23	POK	2003	4aiii	IIA81d	4	2	0.36
2b23	POK	2003	4aiii	none	40	28	0.41
2b23	POK	2004	4aiii	IIA81d	2	2	0.4
2b23	POK	2004	4aiii	none	96	97	0.5
2b23	POK	2005	4aiii	IIA81d	2	1	0.26
2b23	POK	2005	4aiii	none	41	26	0.39
2b23	POK	2006	4aiii	IIA81d	3	2	0.4
2b23	POK	2006	4aiii	none	24	33	0.58
2b23	POK	2006	4av	IIA81a	861		
2b23	POK	2007	4aiii	IIA81d	21	10	0.31
2b23	POK	2007	4aiii	none	65	43	0.4
2b23	SOL	2003	4aiii	IIA81d	2		
2b23	SOL	2003	4aiii	none	40	5	0.11
2b23	SOL	2003	none	none	2		
2b23	SOL	2004	4aiii	IIA81d	2		
2b23	SOL	2004	4aiii	none	72		
2b23	SOL	2004	none	none	8		
2b23	SOL	2005	4aiii	IIA81d	1		
2b23	SOL	2005	4aiii	none	21		
2b23	SOL	2005	none	none	17		
2b23	SOL	2006	4aiii	IIA81d	1		
2b23	SOL	2006	4aiii	none	16		
2b23	SOL	2006	none	none	8		
2b23	SOL	2007	4aiii	IIA81d	1		
2b23	SOL	2007	4aiii	none	14		
2b23	SOL	2007	none	none	8		
2b23	WHG	2003	4aiii	IIA81d	267	877	0.77
2b23	WHG	2003	4aiii	none	192	674	0.78
2b23	WHG	2004	4aiii	IIA81d	187	530	0.74
2b23	WHG	2004	4aiii	none	247	599	0.71
2b23	WHG	2005	4aiii	IIA81d	165	361	0.69
2b23	WHG	2005	4aiii	none	305	498	0.62
2b23	WHG	2005	none	none	1		
2b23	WHG	2006	4aiii	IIA81d	191	274	0.59
2b23	WHG	2006	4aiii	none	514	749	0.59
2b23	WHG	2007	4aiii	IIA81d	229	152	0.4
2b23	WHG	2007	4aiii	none	598	326	0.35
2b3	ANF	2003	4aii	none	7		
2b3	ANF	2003	4bi	none	20		
2b3	ANF	2004	4aii	none	3		
2b3	ANF	2004	4bi	none	17	3	0.17
2b3	ANF	2004	4d	IIA81g	3		
2b3	ANF	2005	4aii	none	4		
2b3	ANF	2005	4bi	none	15	6	0.28
2b3	ANF	2006	4aii	none	2		
2b3	ANF	2006	4bi	none	21	4	0.15
2b3	ANF	2006	4bii	none	1		
2b3	ANF	2007	4aii	none	5		
2b3	ANF	2007	4bi	none	44	8	0.15
2b3	COD	2003	4aii	IIA81c	1		
2b3	COD	2003	4aii	none	544		
2b3	COD	2003	4bi	none	55		
2b3	COD	2003	4d	IIA81g	213		
2b3	COD	2004	4aii	IIA81c	5		
2b3	COD	2004	4aii	none	316		
2b3	COD	2004	4bi	none	48	8	0.15
2b3	COD	2004	4d	IIA81g	70		

Table 6.3.3.1 continued

2b3	COD	2005 4aii	IIA81c	2		
2b3	COD	2005 4aii	none	444		
2b3	COD	2005 4bi	none	51	2	0.03
2b3	COD	2005 4d	IIA81g	53		
2b3	COD	2006 4aii	none	466	147	0.24
2b3	COD	2006 4bi	none	83	19	0.18
2b3	COD	2006 4d	IIA81g	76		
2b3	COD	2007 4aii	IIA81c	2		
2b3	COD	2007 4aii	none	735	266	0.27
2b3	COD	2007 4bi	none	89	28	0.24
2b3	COD	2007 4bii	none	1		
2b3	COD	2007 4d	IIA81g	135		
2b3	HAD	2003 4bi	none	1		
2b3	HAD	2004 4bi	none	1		
2b3	HAD	2005 4aii	none	4		
2b3	HAD	2006 4bi	none	1		
2b3	HAD	2007 4aii	none	4		
2b3	HAD	2007 4bi	none	1		
2b3	HKE	2005 4aii	none	2		
2b3	PLE	2003 4aii	IIA81c	11	4	0.27
2b3	PLE	2003 4aii	none	915	434	0.32
2b3	PLE	2003 4bi	none	1409		
2b3	PLE	2003 4bii	none	43		
2b3	PLE	2003 4d	IIA81g	260		
2b3	PLE	2003 none	none	25		
2b3	PLE	2004 4aii	IIA81c	7	2	0.25
2b3	PLE	2004 4aii	none	817	851	0.51
2b3	PLE	2004 4bi	none	1319	161	0.11
2b3	PLE	2004 4bii	none	28		
2b3	PLE	2004 4d	IIA81g	316		
2b3	PLE	2004 none	none	40		
2b3	PLE	2005 4aii	IIA81c	7		
2b3	PLE	2005 4aii	none	812		
2b3	PLE	2005 4bi	none	1208	61	0.05
2b3	PLE	2005 4bii	none	29		
2b3	PLE	2005 4d	IIA81g	204		
2b3	PLE	2005 none	none	62		
2b3	PLE	2006 4aii	IIA81c	8		
2b3	PLE	2006 4aii	none	652		
2b3	PLE	2006 4bi	none	1325	179	0.12
2b3	PLE	2006 4bii	none	24		
2b3	PLE	2006 4d	IIA81g	194		
2b3	PLE	2006 none	none	28		
2b3	PLE	2007 4aii	IIA81c	6		0.06
2b3	PLE	2007 4aii	none	571	36	0.06
2b3	PLE	2007 4bi	none	1744	142	0.08
2b3	PLE	2007 4biii	IIA81c	1		
2b3	PLE	2007 4d	IIA81g	303	9	0.03
2b3	PLE	2007 none	none	9		
2b3	POK	2003 4bi	none	1		
2b3	POK	2005 4aii	none	1		
2b3	SOL	2003 4aii	IIA81c	6		
2b3	SOL	2003 4aii	none	380		
2b3	SOL	2003 4bi	none	1972		
2b3	SOL	2003 4bii	none	56		
2b3	SOL	2003 4biii	IIA81i	1		
2b3	SOL	2003 4d	IIA81g	1329		
2b3	SOL	2003 none	none	16		
2b3	SOL	2004 4aii	IIA81c	3		
2b3	SOL	2004 4aii	none	301		
2b3	SOL	2004 4bi	none	1835	65	0.03

Table 6.3.3.1 continued

2b3	SOL	2004	4bii	none	29		
2b3	SOL	2004	4d	IIA81g	1098		
2b3	SOL	2004	none	none	44		
2b3	SOL	2005	4aii	IIA81c	1		
2b3	SOL	2005	4aii	none	306		
2b3	SOL	2005	4bi	none	1489	12	0.01
2b3	SOL	2005	4bii	none	41		
2b3	SOL	2005	4biii	IIA81c	2		
2b3	SOL	2005	4d	IIA81g	1305		
2b3	SOL	2005	none	none	48		
2b3	SOL	2006	4aii	IIA81c	2		
2b3	SOL	2006	4aii	none	460		
2b3	SOL	2006	4bi	none	1796	78	0.04
2b3	SOL	2006	4bii	none	18		
2b3	SOL	2006	4d	IIA81g	1284		
2b3	SOL	2006	none	none	19		
2b3	SOL	2007	4aii	IIA81c	2		0.01
2b3	SOL	2007	4aii	none	548		
2b3	SOL	2007	4bi	none	1872	69	0.04
2b3	SOL	2007	4bii	none	1		
2b3	SOL	2007	4d	IIA81g	1492	27	0.02
2b3	SOL	2007	none	none	8		
2b3	WHG	2003	4aii	none	1437	2049	0.59
2b3	WHG	2003	4bi	none	75		
2b3	WHG	2003	4d	IIA81g	14		
2b3	WHG	2004	4aii	none	1151		
2b3	WHG	2004	4bi	none	48	16	0.25
2b3	WHG	2004	4d	IIA81g	18		
2b3	WHG	2005	4aii	none	1258		
2b3	WHG	2005	4bi	none	47	9	0.16
2b3	WHG	2005	4d	IIA81g	17		
2b3	WHG	2005	none	none	1		
2b3	WHG	2006	4aii	none	994	319	0.24
2b3	WHG	2006	4bi	none	74	24	0.24
2b3	WHG	2006	4d	IIA81g	9		
2b3	WHG	2007	4aii	none	969	178	0.16
2b3	WHG	2007	4bi	none	76	9	0.11
2b3	WHG	2007	4d	IIA81g	7		
2b2	WHG	2007	4aii	none	2512	1655	0.4
2b23	ANF	2003	4aiii	IIA81d	14		
2b23	ANF	2003	4aiii	none	98		
2b23	ANF	2004	4aiii	IIA81d	26		
2b23	ANF	2004	4aiii	none	204		
2b23	ANF	2005	4aiii	IIA81d	38		
2b23	ANF	2005	4aiii	none	100		
2b23	ANF	2006	4aiii	IIA81d	36		
2b23	ANF	2006	4aiii	none	141		
2b23	ANF	2006	4av	IIA81a	4		
2b23	ANF	2007	4aiii	IIA81d	78		
2b23	ANF	2007	4aiii	none	195		
2b23	ANF	2007	none	none	1		
2b23	COD	2003	4aiii	IIA81d	32	25	0.44
2b23	COD	2003	4aiii	none	291	187	0.39
2b23	COD	2004	4aiii	IIA81d	28	12	0.3
2b23	COD	2004	4aiii	none	282	126	0.31
2b23	COD	2005	4aiii	IIA81d	33	18	0.35
2b23	COD	2005	4aiii	none	220	124	0.36
2b23	COD	2006	4aiii	IIA81d	28	41	0.59
2b23	COD	2006	4aiii	none	168	196	0.54
2b23	COD	2006	4aiv	IIA81a	1		0.16
2b23	COD	2006	4av	IIA81a	214		

Table 6.3.3.1 continued

2b23	COD	2007	4aiii	IIA81d	48	189	0.8
2b23	COD	2007	4aiii	none	173	424	0.71
2b23	HAD	2003	4aiii	IIA81d	33	36	0.52
2b23	HAD	2003	4aiii	none	293	442	0.6
2b23	HAD	2004	4aiii	IIA81d	85	57	0.4
2b23	HAD	2004	4aiii	none	459	306	0.4
2b23	HAD	2005	4aiii	IIA81d	84	43	0.34
2b23	HAD	2005	4aiii	none	249	132	0.35
2b23	HAD	2006	4aiii	IIA81d	100	292	0.74
2b23	HAD	2006	4aiii	none	279	763	0.73
2b23	HAD	2006	4av	IIA81a	11		
2b23	HAD	2007	4aiii	IIA81d	171	651	0.79
2b23	HAD	2007	4aiii	none	393	1756	0.82
2b23	HKE	2003	4aiii	IIA81d	1		
2b23	HKE	2003	4aiii	none	40		
2b23	HKE	2004	4aiii	IIA81d	1		
2b23	HKE	2004	4aiii	none	54		
2b23	HKE	2005	4aiii	IIA81d	1		
2b23	HKE	2005	4aiii	none	34		
2b23	HKE	2006	4aiii	IIA81d	1		
2b23	HKE	2006	4aiii	none	27		
2b23	HKE	2006	4av	IIA81a	8		
2b23	HKE	2007	4aiii	IIA81d	1		
2b23	HKE	2007	4aiii	none	37		
2b23	NEP	2003	4aiii	IIA81d	184		
2b23	NEP	2003	4aiii	none	674		
2b23	NEP	2004	4aiii	IIA81d	374		
2b23	NEP	2004	4aiii	none	1480		
2b23	NEP	2005	4aiii	IIA81d	693		
2b23	NEP	2005	4aiii	none	1317		

In accordance with the ToR, the following Table 6.3.3.2 lists the landings and discards at age by derogation of cod, plaice and sole. Additional species specific data queries could be provided on request depending on data provisions by the experts or national institutes.

Table 6.3.3.2 Skagerrak, North Sea (incl. 2EU), and Eastern Channel: Cod (COD), plaice (PLE) and sole (SOL) landings (L) and discards (D) at ages 1-9 (‘000) by derogation, 2003-2007.

SPECIES	REG_AREA	REG_GEAR	SPECON	AGE	2003 L	2003 D	2004 L	2004 D	2005 L	2005 D	2006 L	2006 D	2007 L	2007 D
COD	2b	4ai	none	1										
COD	2b	4ai	none	2	8		1		4		1		1	
COD	2b	4ai	none	3	6		3		2		2			
COD	2b	4ai	none	4	3		2		2				1	
COD	2b	4ai	none	5	1		1							
COD	2b	4ai	none	6										
COD	2b	4ai	none	7										
COD	2b	4ai	none	8										
COD	2b	4ai	none	9										
COD	2b	4aii	IIA81b	1						8		37		74
COD	2b	4aii	IIA81b	2						8				12
COD	2b	4aii	IIA81b	3										0
COD	2b	4aii	IIA81b	4										
COD	2b	4aii	IIA81b	5										
COD	2b	4aii	IIA81b	6										
COD	2b	4aii	IIA81b	7										
COD	2b	4aii	IIA81b	8										
COD	2b	4aii	IIA81b	9										
COD	2b	4aii	IIA81d	1	18	866	51	410	42	399	67	1316	19	1508
COD	2b	4aii	IIA81d	2	263	249	141	148	158	246	139	115	149	1185
COD	2b	4aii	IIA81d	3	80	4	92	11	57	1	84	3	51	12
COD	2b	4aii	IIA81d	4	72	1	11		11		9		15	3
COD	2b	4aii	IIA81d	5	3		11		4		2		4	
COD	2b	4aii	IIA81d	6	1		1		3		2		1	
COD	2b	4aii	IIA81d	7										
COD	2b	4aii	IIA81d	8										
COD	2b	4aii	IIA81d	9										
COD	2b	4aiv	IIA81c	1		1	6	4	2	20	5	21		0
COD	2b	4aiv	IIA81c	2	26	2	15	3	43	11	17	2	12	10
COD	2b	4aiv	IIA81c	3	11	1	16		12		6	1	4	1
COD	2b	4aiv	IIA81c	4	5		3		6		1		1	0
COD	2b	4aiv	IIA81c	5	1		1		1					
COD	2b	4aiv	IIA81c	6					1					
COD	2b	4aiv	IIA81c	7										
COD	2b	4aiv	IIA81c	8										
COD	2b	4aiv	IIA81c	9										
COD	2b	4aiv	IIA81d	1	1	11	2	4	11	8	3	13		7
COD	2b	4aiv	IIA81d	2	23	6	22	2	25	6	11	5	22	76
COD	2b	4aiv	IIA81d	3	11	1	13		7		13	4	13	3
COD	2b	4aiv	IIA81d	4	11		2		3		3		8	0
COD	2b	4aiv	IIA81d	5	1		1		1		2		2	0
COD	2b	4aiv	IIA81d	6					1					
COD	2b	4aiv	IIA81d	7										
COD	2b	4aiv	IIA81d	8										
COD	2b	4aiv	IIA81d	9										
COD	2b	4aiv	none	1	1	19	51	87	36	183	6	149	2	11
COD	2b	4aiv	none	2	123	31	107	60	312	94	90	24	121	402
COD	2b	4aiv	none	3	64	8	95	4	101	2	153	12	98	19
COD	2b	4aiv	none	4	38		18		45		23	1	66	2
COD	2b	4aiv	none	5	6		7		8		10		9	0
COD	2b	4aiv	none	6	1		1		3		2		4	
COD	2b	4aiv	none	7	1				1		1		1	
COD	2b	4aiv	none	8									1	
COD	2b	4aiv	none	9										
COD	2b	4av	IIA81c	1			5	3	2				1	0
COD	2b	4av	IIA81c	2	33	19	15	1	32		4		12	1
COD	2b	4av	IIA81c	3	8		17		9		1		1	0
COD	2b	4av	IIA81c	4	4		3		5					0
COD	2b	4av	IIA81c	5	1		1		1					
COD	2b	4av	IIA81c	6										
COD	2b	4av	IIA81c	7										
COD	2b	4av	IIA81c	8										
COD	2b	4av	IIA81c	9										
COD	2b	4av	IIA81d	1	1	10	92	37	39	30	6	48	12	31
COD	2b	4av	IIA81d	2	198	74	131	15	150	15	169	15	172	164
COD	2b	4av	IIA81d	3	47	3	74	3	49		95	4	36	6
COD	2b	4av	IIA81d	4	29	1	6		30		13		16	2
COD	2b	4av	IIA81d	5	5		5		6		4		4	0
COD	2b	4av	IIA81d	6			1		5		1		1	0

Table 6.3.3.2 continued

COD	2b	4av	IIA81d	7					1		1		1	
COD	2b	4av	IIA81d	8									1	
COD	2b	4av	IIA81d	9										
COD	2b	4av	none	1	74	1264	504	1675	164	1593	103	3863	81	1245
COD	2b	4av	none	2	3464	1545	2079	1271	3601	1665	1823	796	2142	5790
COD	2b	4av	none	3	1751	136	2011	285	1358	35	2279	333	1031	244
COD	2b	4av	none	4	1270	23	520		689		447	23	780	55
COD	2b	4av	none	5	142		493		203		245	2	189	3
COD	2b	4av	none	6	14		63		185		50		53	3
COD	2b	4av	none	7	22		10		25		50	1	27	
COD	2b	4av	none	8	5		10		7		4		24	
COD	2b	4av	none	9	5		5		1		1		1	
COD	2b	4ci	none	1			2							
COD	2b	4ci	none	2	28		9		29		13		8	
COD	2b	4ci	none	3	28		30		18		33		8	
COD	2b	4ci	none	4	13		12		16		6		6	
COD	2b	4ci	none	5	4		4		3		3		1	
COD	2b	4ci	none	6	1		1		1					
COD	2b	4ci	none	7										
COD	2b	4ci	none	8										
COD	2b	4ci	none	9										
COD	2b	4cii	none	1	4		22		9		6		2	
COD	2b	4cii	none	2	326		159		431	6	195		144	
COD	2b	4cii	none	3	281		415		240		486		170	
COD	2b	4cii	none	4	92		138		155		83		129	
COD	2b	4cii	none	5	19		30		27		35		14	
COD	2b	4cii	none	6	4		6		7		5		4	
COD	2b	4cii	none	7	1		1		1		1		1	
COD	2b	4cii	none	8							1			
COD	2b	4cii	none	9										
COD	2b	4ciii	none	1	2		19		5		4		1	
COD	2b	4ciii	none	2	220	2	138		266		122		84	
COD	2b	4ciii	none	3	261		522		268		450		181	
COD	2b	4ciii	none	4	221		240		288		117		222	
COD	2b	4ciii	none	5	70		80		72		72		35	
COD	2b	4ciii	none	6	9		19		27		10		11	
COD	2b	4ciii	none	7	8		3		4		6		3	
COD	2b	4ciii	none	8	2		2		1		3		1	
COD	2b	4ciii	none	9										
COD	2b	4civ	none	1										
COD	2b	4civ	none	2	2		1		3		1		1	
COD	2b	4civ	none	3	3		6		3		5		2	
COD	2b	4civ	none	4	2		4		4		1		4	
COD	2b	4civ	none	5	1		2		1		1		1	
COD	2b	4civ	none	6					1					
COD	2b	4civ	none	7										
COD	2b	4civ	none	8										
COD	2b	4civ	none	9										
COD	2b	4d	none	1			1							
COD	2b	4d	none	2	4		3		3		4			
COD	2b	4d	none	3	2		5		3		7			
COD	2b	4d	none	4	1		1		3		1		1	
COD	2b	4d	none	5					1					
COD	2b	4d	none	6										
COD	2b	4d	none	7										
COD	2b	4d	none	8										
COD	2b	4d	none	9										
COD	2b	4e	none	1	1		1		1		1		1	
COD	2b	4e	none	2	65		13		34		24		47	
COD	2b	4e	none	3	50		32		18		60		36	
COD	2b	4e	none	4	20		13		13		14		18	
COD	2b	4e	none	5	3		4		2		8		2	
COD	2b	4e	none	6			1		1		1		1	
COD	2b	4e	none	7							1			
COD	2b	4e	none	8										
COD	2b	4e	none	9										
COD	2b	none	none	1	9		44		9	331	4		1	0
COD	2b	none	none	2	506		168		347	13	147		109	198
COD	2b	none	none	3	246		403		158		335		98	
COD	2b	none	none	4	68		115		100		46		70	

Table 6.3.3.2 continued

COD	2b	none	none	5	14		25		20		18		6	
COD	2b	none	none	6	3		5		5		2		1	
COD	2b	none	none	7	1		1		1		1			
COD	2b	none	none	8										
COD	2b	none	none	9										
COD	2b1	4aii	none	1	4		1	633						
COD	2b1	4aii	none	2	81		2	12	4					
COD	2b1	4aii	none	3	24		9		1		1			
COD	2b1	4aii	none	4	3		2							
COD	2b1	4aii	none	5	1									
COD	2b1	4aii	none	6	1									
COD	2b1	4aii	none	7										
COD	2b1	4aii	none	8										
COD	2b1	4aii	none	9										
COD	2b1	4aiii	IIA81a	1							2			
COD	2b1	4aiii	IIA81a	2							31			
COD	2b1	4aiii	IIA81a	3							82			
COD	2b1	4aiii	IIA81a	4							12			
COD	2b1	4aiii	IIA81a	5							5			
COD	2b1	4aiii	IIA81a	6							1			
COD	2b1	4aiii	IIA81a	7										
COD	2b1	4aiii	IIA81a	8										
COD	2b1	4aiii	IIA81a	9										
COD	2b1	4aiii	IIA81d	1			3		1					
COD	2b1	4aiii	IIA81d	2	7		5		11		4			
COD	2b1	4aiii	IIA81d	3	2		9		3		6			
COD	2b1	4aiii	IIA81d	4			1		2		1			
COD	2b1	4aiii	IIA81d	5					1					
COD	2b1	4aiii	IIA81d	6										
COD	2b1	4aiii	IIA81d	7										
COD	2b1	4aiii	IIA81d	8										
COD	2b1	4aiii	IIA81d	9										
COD	2b1	4aiii	IIa81l	1							1			
COD	2b1	4aiii	IIa81l	2							4			
COD	2b1	4aiii	IIa81l	3							7			
COD	2b1	4aiii	IIa81l	4							1			
COD	2b1	4aiii	IIa81l	5										
COD	2b1	4aiii	IIa81l	6										
COD	2b1	4aiii	IIa81l	7										
COD	2b1	4aiii	IIa81l	8										
COD	2b1	4aiii	IIa81l	9										
COD	2b1	4aiii	none	1	18		111	1682	25	1007	15	2071	5	1902
COD	2b1	4aiii	none	2	621		229	264	744	807	130	515	170	629
COD	2b1	4aiii	none	3	211		577	166	183	49	261	170	114	56
COD	2b1	4aiii	none	4	35		108		102	14	39	24	71	13
COD	2b1	4aiii	none	5	14		29		25	2	16	10	8	1
COD	2b1	4aiii	none	6	5		12		9	2	5	2	4	
COD	2b1	4aiii	none	7	2		1		3		1		1	
COD	2b1	4aiii	none	8			1		1				1	
COD	2b1	4aiii	none	9	1				1					
COD	2b1	4aiv	IIA81a	1										
COD	2b1	4aiv	IIA81a	2							5			
COD	2b1	4aiv	IIA81a	3							20			
COD	2b1	4aiv	IIA81a	4							3			
COD	2b1	4aiv	IIA81a	5							1			
COD	2b1	4aiv	IIA81a	6										
COD	2b1	4aiv	IIA81a	7										
COD	2b1	4aiv	IIA81a	8										
COD	2b1	4aiv	IIA81a	9										
COD	2b1	4av	IIA81a	1										
COD	2b1	4av	IIA81a	2							4			
COD	2b1	4av	IIA81a	3							5			
COD	2b1	4av	IIA81a	4							1			
COD	2b1	4av	IIA81a	5										
COD	2b1	4av	IIA81a	6										
COD	2b1	4av	IIA81a	7										
COD	2b1	4av	IIA81a	8										
COD	2b1	4av	IIA81a	9										
COD	2b1	4av	IIA81j	1										
COD	2b1	4av	IIA81j	2										

Table 6.3.3.2 continued

COD	2b1	4av	IIA81j	3										
COD	2b1	4av	IIA81j	4										
COD	2b1	4av	IIA81j	5										
COD	2b1	4av	IIA81j	6										
COD	2b1	4av	IIA81j	7										
COD	2b1	4av	IIA81j	8										
COD	2b1	4av	IIA81j	9										
COD	2b1	none	none	1										
COD	2b1	none	none	2										
COD	2b1	none	none	3										
COD	2b1	none	none	4										
COD	2b1	none	none	5										
COD	2b1	none	none	6										
COD	2b1	none	none	7										
COD	2b1	none	none	8										
COD	2b1	none	none	9										
COD	2b12	4bi	none	1	91	85	470	950	330	1584	395	1778	386	565
COD	2b12	4bi	none	2	1555	83	207	200	354	230	556	47	596	211
COD	2b12	4bi	none	3	149	4	475	42	50	47	205		149	222
COD	2b12	4bi	none	4	61		46	1	71	8	16		45	80
COD	2b12	4bi	none	5	22		15		9		25		5	
COD	2b12	4bi	none	6	3		9		6		5		10	
COD	2b12	4bi	none	7	3		3		3		2		1	
COD	2b12	4bi	none	8	1		2		1		2		1	
COD	2b12	4bi	none	9	1		1		1				1	
COD	2b12	4bii	none	1										
COD	2b12	4bii	none	2										
COD	2b12	4bii	none	3										
COD	2b12	4bii	none	4										
COD	2b12	4bii	none	5										
COD	2b12	4bii	none	6										
COD	2b12	4bii	none	7										
COD	2b12	4bii	none	8										
COD	2b12	4bii	none	9										
COD	2b12	4biii	IIA81c	1			7							
COD	2b12	4biii	IIA81c	2	15		5							
COD	2b12	4biii	IIA81c	3	1									
COD	2b12	4biii	IIA81c	4										
COD	2b12	4biii	IIA81c	5										
COD	2b12	4biii	IIA81c	6										
COD	2b12	4biii	IIA81c	7										
COD	2b12	4biii	IIA81c	8										
COD	2b12	4biii	IIA81c	9										
COD	2b12	4biii	IIA81i	1			2							
COD	2b12	4biii	IIA81i	2	2		1							
COD	2b12	4biii	IIA81i	3										
COD	2b12	4biii	IIA81i	4										
COD	2b12	4biii	IIA81i	5										
COD	2b12	4biii	IIA81i	6										
COD	2b12	4biii	IIA81i	7										
COD	2b12	4biii	IIA81i	8										
COD	2b12	4biii	IIA81i	9										
COD	2b12	4biii	none	1			1							
COD	2b12	4biii	none	2	2		1		3		1			
COD	2b12	4biii	none	3	1		2		2		1			
COD	2b12	4biii	none	4	1				1				1	
COD	2b12	4biii	none	5					1					
COD	2b12	4biii	none	6										
COD	2b12	4biii	none	7										
COD	2b12	4biii	none	8										
COD	2b12	4biii	none	9										
COD	2b12	4biv	IIA81c	1	1		6		2					
COD	2b12	4biv	IIA81c	2	39		18		52					
COD	2b12	4biv	IIA81c	3	15		33		19					
COD	2b12	4biv	IIA81c	4	6		11		10					
COD	2b12	4biv	IIA81c	5	2		3		2					
COD	2b12	4biv	IIA81c	6			1		1					
COD	2b12	4biv	IIA81c	7										
COD	2b12	4biv	IIA81c	8										
COD	2b12	4biv	IIA81c	9										

Table 6.3.3.2 continued

COD	2b12	4biv	IIA81e	1										
COD	2b12	4biv	IIA81e	2										
COD	2b12	4biv	IIA81e	3										
COD	2b12	4biv	IIA81e	4										
COD	2b12	4biv	IIA81e	5										
COD	2b12	4biv	IIA81e	6										
COD	2b12	4biv	IIA81e	7										
COD	2b12	4biv	IIA81e	8										
COD	2b12	4biv	IIA81e	9										
COD	2b12	4biv	IIA81i	1										
COD	2b12	4biv	IIA81i	2	10									
COD	2b12	4biv	IIA81i	3										
COD	2b12	4biv	IIA81i	4										
COD	2b12	4biv	IIA81i	5										
COD	2b12	4biv	IIA81i	6										
COD	2b12	4biv	IIA81i	7										
COD	2b12	4biv	IIA81i	8										
COD	2b12	4biv	IIA81i	9										
COD	2b12	4biv	none	1	6		80		16				2	
COD	2b12	4biv	none	2	239		181		396		74		86	
COD	2b12	4biv	none	3	81		218		95		114		74	
COD	2b12	4biv	none	4	17		43		38		16		55	
COD	2b12	4biv	none	5	7		9		9		4		7	
COD	2b12	4biv	none	6	1		6		3		2		5	
COD	2b12	4biv	none	7	1		1		1				1	
COD	2b12	4biv	none	8			1		1					
COD	2b12	4biv	none	9										
COD	2b2	4aii	IIA81c	1		37	17	35	18	20	15	28	3	1
COD	2b2	4aii	IIA81c	2	64	46	15	16	27	20	21		28	2
COD	2b2	4aii	IIA81c	3	20		19	1	10		3		4	
COD	2b2	4aii	IIA81c	4	10	2	7		5					
COD	2b2	4aii	IIA81c	5	3		3		1					
COD	2b2	4aii	IIA81c	6			1		1					
COD	2b2	4aii	IIA81c	7										
COD	2b2	4aii	IIA81c	8										
COD	2b2	4aii	IIA81c	9										
COD	2b2	4aii	none	1	29	1514	124	697	132	984	145	2961	41	3788
COD	2b2	4aii	none	2	572	501	281	200	423	419	306	252	353	2664
COD	2b2	4aii	none	3	168	4	155	13	112	1	179	7	109	17
COD	2b2	4aii	none	4	138	5	23		25		21		36	4
COD	2b2	4aii	none	5	8		18		9		7		9	
COD	2b2	4aii	none	6	1		2		6		4		2	
COD	2b2	4aii	none	7	1				1		1		1	
COD	2b2	4aii	none	8										
COD	2b2	4aii	none	9										
COD	2b2	4civ	IIA81f	1										
COD	2b2	4civ	IIA81f	2	1									
COD	2b2	4civ	IIA81f	3	2		1							
COD	2b2	4civ	IIA81f	4	1									
COD	2b2	4civ	IIA81f	5										
COD	2b2	4civ	IIA81f	6										
COD	2b2	4civ	IIA81f	7										
COD	2b2	4civ	IIA81f	8										
COD	2b2	4civ	IIA81f	9										
COD	2b23	4aiii	IIA81d	1	1	47	3	30	10	34	5	117	2	245
COD	2b23	4aiii	IIA81d	2	14	14	11	8	14	18	13	16	20	178
COD	2b23	4aiii	IIA81d	3	5		6	1	4		6		6	1
COD	2b23	4aiii	IIA81d	4	4		1		1		1		2	0
COD	2b23	4aiii	IIA81d	5			1							
COD	2b23	4aiii	IIA81d	6										
COD	2b23	4aiii	IIA81d	7										
COD	2b23	4aiii	IIA81d	8										
COD	2b23	4aiii	IIA81d	9										
COD	2b23	4aiii	none	1	3	412	15	356	48	227	17	632	14	543
COD	2b23	4aiii	none	2	111	83	63	106	71	174	63	88	67	464
COD	2b23	4aiii	none	3	48	1	71	8	36		39	2	21	4
COD	2b23	4aiii	none	4	26		16		13		5		10	1
COD	2b23	4aiii	none	5	4		9		4		2		2	
COD	2b23	4aiii	none	6			1		2		1		1	
COD	2b23	4aiii	none	7										

Table 6.3.3.2 continued

COD	2b23	4aiii	none	8										
COD	2b23	4aiii	none	9										
COD	2b23	4av	IIA81a	1							1			
COD	2b23	4av	IIA81a	2							21			
COD	2b23	4av	IIA81a	3							23			
COD	2b23	4av	IIA81a	4							9			
COD	2b23	4av	IIA81a	5							2			
COD	2b23	4av	IIA81a	6							1			
COD	2b23	4av	IIA81a	7							1			
COD	2b23	4av	IIA81a	8										
COD	2b23	4av	IIA81a	9										
COD	2b3	4aii	IIA81c	1										
COD	2b3	4aii	IIA81c	2										
COD	2b3	4aii	IIA81c	3										
COD	2b3	4aii	IIA81c	4										
COD	2b3	4aii	IIA81c	5										
COD	2b3	4aii	IIA81c	6										
COD	2b3	4aii	IIA81c	7										
COD	2b3	4aii	IIA81c	8										
COD	2b3	4aii	IIA81c	9										
COD	2b3	4aii	none	1							31	653	1	125
COD	2b3	4aii	none	2							93	35	136	661
COD	2b3	4aii	none	3							64	1	36	7
COD	2b3	4aii	none	4							8		26	3
COD	2b3	4aii	none	5							3		5	0
COD	2b3	4aii	none	6							2		2	
COD	2b3	4aii	none	7							2		1	
COD	2b3	4aii	none	8									1	
COD	2b3	4aii	none	9										
COD	2b3	4bi	none	1									42	
COD	2b3	4bi	none	2										
COD	2b3	4bi	none	3										
COD	2b3	4bi	none	4										
COD	2b3	4bi	none	5										
COD	2b3	4bi	none	6										
COD	2b3	4bi	none	7										
COD	2b3	4bi	none	8										
COD	2b3	4bi	none	9										
PLE	2b	4ai	none	1										
PLE	2b	4ai	none	2	36		4		3				1	
PLE	2b	4ai	none	3	26		43		4		21		3	
PLE	2b	4ai	none	4	21		16		8		17		8	
PLE	2b	4ai	none	5	20		6		4		23		6	
PLE	2b	4ai	none	6	10		3		2		8		3	
PLE	2b	4ai	none	7	4		1		1		5		1	
PLE	2b	4ai	none	8							2			
PLE	2b	4ai	none	9							2			
PLE	2b	4aii	IIA81b	1						9		16		120
PLE	2b	4aii	IIA81b	2						151		42		668
PLE	2b	4aii	IIA81b	3						45		38		188
PLE	2b	4aii	IIA81b	4						12		1		28
PLE	2b	4aii	IIA81b	5						4				11
PLE	2b	4aii	IIA81b	6						5				3
PLE	2b	4aii	IIA81b	7						1				1
PLE	2b	4aii	IIA81b	8						1				
PLE	2b	4aii	IIA81b	9										
PLE	2b	4aii	IIA81d	1			81							
PLE	2b	4aii	IIA81d	2	787	361	146	866			7		58	37
PLE	2b	4aii	IIA81d	3	323	112	322	289			53		65	12
PLE	2b	4aii	IIA81d	4	433	99	82	192			36		36	
PLE	2b	4aii	IIA81d	5	275	58	77				39		13	12
PLE	2b	4aii	IIA81d	6	41		42				7		10	
PLE	2b	4aii	IIA81d	7	10		8				3		3	
PLE	2b	4aii	IIA81d	8	1		2				1		1	
PLE	2b	4aii	IIA81d	9			2						1	
PLE	2b	4aiv	IIA81c	1			1		6					
PLE	2b	4aiv	IIA81c	2	1828	1205	336		834		79			
PLE	2b	4aiv	IIA81c	3	905		4078		1109		356			
PLE	2b	4aiv	IIA81c	4	1173	301	1769		2459		249			
PLE	2b	4aiv	IIA81c	5	642		755		893		12			

Table 6.3.3.2 continued

PLE	2b	4aiv	IIA81c	6	381		436		379		11			
PLE	2b	4aiv	IIA81c	7	223		137		183		5			
PLE	2b	4aiv	IIA81c	8	28		41		82					
PLE	2b	4aiv	IIA81c	9	9		5		25					
PLE	2b	4aiv	IIA81d	1										
PLE	2b	4aiv	IIA81d	2	1						1			
PLE	2b	4aiv	IIA81d	3	2						4			
PLE	2b	4aiv	IIA81d	4	3						3			
PLE	2b	4aiv	IIA81d	5	3						1			
PLE	2b	4aiv	IIA81d	6	2									
PLE	2b	4aiv	IIA81d	7										
PLE	2b	4aiv	IIA81d	8										
PLE	2b	4aiv	IIA81d	9										
PLE	2b	4aiv	none	1	1		1		12				87	77
PLE	2b	4aiv	none	2	805	787	331		871		229		1611	407
PLE	2b	4aiv	none	3	728		3133		1242		2817		2704	188
PLE	2b	4aiv	none	4	1099	197	855		2876		2199		4050	62
PLE	2b	4aiv	none	5	910		475		897		1239		1824	2
PLE	2b	4aiv	none	6	518		277		339		313		1274	
PLE	2b	4aiv	none	7	196		51		122		99		138	
PLE	2b	4aiv	none	8	23		14		39		61		46	
PLE	2b	4aiv	none	9	5		1		13		19		16	
PLE	2b	4av	IIA81c	1										
PLE	2b	4av	IIA81c	2	618	2308	65		105					
PLE	2b	4av	IIA81c	3	479	31	735		155					
PLE	2b	4av	IIA81c	4	548	603	369		381					
PLE	2b	4av	IIA81c	5	345	26	142		148					
PLE	2b	4av	IIA81c	6	177		83		62					
PLE	2b	4av	IIA81c	7	112		30		32					
PLE	2b	4av	IIA81c	8	11		9		18					
PLE	2b	4av	IIA81c	9	4		1		7					
PLE	2b	4av	IIA81d	1										
PLE	2b	4av	IIA81d	2	230	297	14		38		41			
PLE	2b	4av	IIA81d	3	123	24	310		76		327			
PLE	2b	4av	IIA81d	4	153	92	233		267		153			
PLE	2b	4av	IIA81d	5	158	21	119		120		51			
PLE	2b	4av	IIA81d	6	61		77		51		12			
PLE	2b	4av	IIA81d	7	46		32		31		3			
PLE	2b	4av	IIA81d	8	7		11		16		2			
PLE	2b	4av	IIA81d	9	2		1		6					
PLE	2b	4av	IIA81h	1										
PLE	2b	4av	IIA81h	2										
PLE	2b	4av	IIA81h	3							1			
PLE	2b	4av	IIA81h	4							1			
PLE	2b	4av	IIA81h	5							1			
PLE	2b	4av	IIA81h	6										
PLE	2b	4av	IIA81h	7										
PLE	2b	4av	IIA81h	8										
PLE	2b	4av	IIA81h	9										
PLE	2b	4av	none	1	1		3		8				70	56
PLE	2b	4av	none	2	3245	11313	561		1504		881		2391	632
PLE	2b	4av	none	3	2734	309	6091		2204		8652		3549	240
PLE	2b	4av	none	4	2990	3076	3169		5610		4795		5912	64
PLE	2b	4av	none	5	2302	262	1457		2241		2821		2673	8
PLE	2b	4av	none	6	1316		882		956		726		1629	
PLE	2b	4av	none	7	974		369		507		293		186	
PLE	2b	4av	none	8	145		123		254		138		73	
PLE	2b	4av	none	9	47		17		97		46		16	
PLE	2b	4ci	none	1				224		2				
PLE	2b	4ci	none	2	50	96	7	36	23	118	8		23	
PLE	2b	4ci	none	3	66	56	120	81	56	51	100		43	
PLE	2b	4ci	none	4	129	28	82	6	224	70	71		71	
PLE	2b	4ci	none	5	106	3	45		94	4	56		28	
PLE	2b	4ci	none	6	73		33		36	1	12		17	
PLE	2b	4ci	none	7	44		14		17		5		2	
PLE	2b	4ci	none	8	6		7		7		4		1	
PLE	2b	4ci	none	9	2		1		2		1			
PLE	2b	4cii	none	1	1				1				7	
PLE	2b	4cii	none	2	394		55		113		77		103	
PLE	2b	4cii	none	3	566		1594		405		1507		385	

Table 6.3.3.2 continued

PLE	2b	4cii	none	4	1347	1098	1874	1263	1168
PLE	2b	4cii	none	5	1300	689	853	1143	972
PLE	2b	4cii	none	6	835	475	377	295	638
PLE	2b	4cii	none	7	588	158	194	140	134
PLE	2b	4cii	none	8	74	72	87	70	43
PLE	2b	4cii	none	9	26	9	35	38	10
PLE	2b	4ciii	none	1					1
PLE	2b	4ciii	none	2	110	16	35	26	19
PLE	2b	4ciii	none	3	332	657	241	819	89
PLE	2b	4ciii	none	4	1379	721	1428	723	365
PLE	2b	4ciii	none	5	2009	1025	1007	1619	375
PLE	2b	4ciii	none	6	1422	879	630	652	244
PLE	2b	4ciii	none	7	2085	423	378	475	64
PLE	2b	4ciii	none	8	249	320	217	207	22
PLE	2b	4ciii	none	9	122	59	93	189	5
PLE	2b	4civ	none	1					
PLE	2b	4civ	none	2	2				1
PLE	2b	4civ	none	3	2	2	2	3	1
PLE	2b	4civ	none	4	3	2	10	2	4
PLE	2b	4civ	none	5	3	2	5	1	4
PLE	2b	4civ	none	6	2	2	3	1	4
PLE	2b	4civ	none	7	3	2	2		1
PLE	2b	4civ	none	8	1	1	1		
PLE	2b	4civ	none	9			1		
PLE	2b	4d	none	1					
PLE	2b	4d	none	2		18	8	1	
PLE	2b	4d	none	3	14	144	21	19	4
PLE	2b	4d	none	4	46	82	81	24	19
PLE	2b	4d	none	5	24	23	32	42	10
PLE	2b	4d	none	6	16	14	11	9	6
PLE	2b	4d	none	7	8	5	5	9	1
PLE	2b	4d	none	8	1	1	3	12	
PLE	2b	4d	none	9			1	6	
PLE	2b	4e	none	1					
PLE	2b	4e	none	2		1			
PLE	2b	4e	none	3		6		7	
PLE	2b	4e	none	4	1	4	2	5	
PLE	2b	4e	none	5	1	6	1	4	
PLE	2b	4e	none	6	1	5		1	
PLE	2b	4e	none	7	1	3			
PLE	2b	4e	none	8		2			
PLE	2b	4e	none	9					
PLE	2b	none	none	1	1		1		13
PLE	2b	none	none	2	374	83	87	66	264
PLE	2b	none	none	3	435	1445	292	880	496
PLE	2b	none	none	4	973	695	1181	684	906
PLE	2b	none	none	5	979	483	516	503	478
PLE	2b	none	none	6	649	321	219	104	345
PLE	2b	none	none	7	326	98	103	43	46
PLE	2b	none	none	8	45	46	43	21	15
PLE	2b	none	none	9	11	6	17	9	4
PLE	2b1	4aii	none	1					
PLE	2b1	4aii	none	2	26	9	2		
PLE	2b1	4aii	none	3	29	60	3	8	
PLE	2b1	4aii	none	4	56	15	9	8	
PLE	2b1	4aii	none	5	69	12	3	6	
PLE	2b1	4aii	none	6	39	7	1	1	
PLE	2b1	4aii	none	7	9	1	1		
PLE	2b1	4aii	none	8	1	1			
PLE	2b1	4aii	none	9					
PLE	2b1	4aiii	IIA81a	1					
PLE	2b1	4aiii	IIA81a	2				16	
PLE	2b1	4aiii	IIA81a	3				185	
PLE	2b1	4aiii	IIA81a	4				158	
PLE	2b1	4aiii	IIA81a	5				117	
PLE	2b1	4aiii	IIA81a	6				18	
PLE	2b1	4aiii	IIA81a	7				8	
PLE	2b1	4aiii	IIA81a	8				5	
PLE	2b1	4aiii	IIA81a	9				2	
PLE	2b1	4aiii	IIA81d	1					

Table 6.3.3.2 continued

PLE	2b1	4aiii	IIA81d	2			4		2		2			
PLE	2b1	4aiii	IIA81d	3	2		32		6		28			
PLE	2b1	4aiii	IIA81d	4	6		7		21		20			
PLE	2b1	4aiii	IIA81d	5	6		5		9		15			
PLE	2b1	4aiii	IIA81d	6	5		3		4		2			
PLE	2b1	4aiii	IIA81d	7	1		1		2		1			
PLE	2b1	4aiii	IIA81d	8										
PLE	2b1	4aiii	IIA81d	9										
PLE	2b1	4aiii	IIa81l	1										
PLE	2b1	4aiii	IIa81l	2							2			
PLE	2b1	4aiii	IIa81l	3							14			
PLE	2b1	4aiii	IIa81l	4							13			
PLE	2b1	4aiii	IIa81l	5							10			
PLE	2b1	4aiii	IIa81l	6							2			
PLE	2b1	4aiii	IIa81l	7							1			
PLE	2b1	4aiii	IIa81l	8										
PLE	2b1	4aiii	IIa81l	9										
PLE	2b1	4aiii	none	1	4			501	2	298		98	25	502
PLE	2b1	4aiii	none	2	1124		540	3376	152	2620	85	843	220	2444
PLE	2b1	4aiii	none	3	1325		6016	2671	407	1069	1109	1399	345	1176
PLE	2b1	4aiii	none	4	2385		1401	244	1487	458	765	135	519	428
PLE	2b1	4aiii	none	5	2786		1223		575	117	500	31	370	103
PLE	2b1	4aiii	none	6	1412		732		266	105	88	2	294	19
PLE	2b1	4aiii	none	7	247		122		151	48	43	4	31	2
PLE	2b1	4aiii	none	8	32		45		30	15	24		10	
PLE	2b1	4aiii	none	9	2		5		19		4		4	
PLE	2b1	4aiv	IIA81a	1										
PLE	2b1	4aiv	IIA81a	2							39			
PLE	2b1	4aiv	IIA81a	3							571			
PLE	2b1	4aiv	IIA81a	4							479			
PLE	2b1	4aiv	IIA81a	5							355			
PLE	2b1	4aiv	IIA81a	6							50			
PLE	2b1	4aiv	IIA81a	7							19			
PLE	2b1	4aiv	IIA81a	8							10			
PLE	2b1	4aiv	IIA81a	9							4			
PLE	2b1	4av	IIA81a	1										
PLE	2b1	4av	IIA81a	2							13			
PLE	2b1	4av	IIA81a	3							143			
PLE	2b1	4av	IIA81a	4							108			
PLE	2b1	4av	IIA81a	5							64			
PLE	2b1	4av	IIA81a	6							10			
PLE	2b1	4av	IIA81a	7							4			
PLE	2b1	4av	IIA81a	8							2			
PLE	2b1	4av	IIA81a	9										
PLE	2b1	4av	IIA81j	1										
PLE	2b1	4av	IIA81j	2							2			
PLE	2b1	4av	IIA81j	3							13			
PLE	2b1	4av	IIA81j	4							9			
PLE	2b1	4av	IIA81j	5							4			
PLE	2b1	4av	IIA81j	6							1			
PLE	2b1	4av	IIA81j	7										
PLE	2b1	4av	IIA81j	8										
PLE	2b1	4av	IIA81j	9										
PLE	2b1	none	none	1										
PLE	2b1	none	none	2	1									
PLE	2b1	none	none	3			2							
PLE	2b1	none	none	4										
PLE	2b1	none	none	5	1									
PLE	2b1	none	none	6										
PLE	2b1	none	none	7										
PLE	2b1	none	none	8										
PLE	2b1	none	none	9										
PLE	2b12	4bi	none	1	425	49819	373	170104	2365	75902	277	147364	823	33308
PLE	2b12	4bi	none	2	22046	413001	6088	122915	9242	215841	12054	123673	9407	144775
PLE	2b12	4bi	none	3	23954	27493	54243	78092	12813	21839	29194	59961	19487	46556
PLE	2b12	4bi	none	4	24424	8099	13356	2005	42008	10612	9330	3096	22222	5670
PLE	2b12	4bi	none	5	11226	2292	8653	450	5452	2305	22033	1404	5346	485
PLE	2b12	4bi	none	6	6261	79	4214	42	3315	1724	2321	26	9482	2270
PLE	2b12	4bi	none	7	7456	444	1745	2	1868	16	2409	36	1150	158
PLE	2b12	4bi	none	8	422		2501		848		803	5	1195	104

Table 6.3.3.2 continued

PLE	2b12	4bi	none	9	292		116		1263	14	532		354	199
PLE	2b12	4bii	none	1										
PLE	2b12	4bii	none	2					6		1			
PLE	2b12	4bii	none	3			29		7		19			
PLE	2b12	4bii	none	4			11		4		17			
PLE	2b12	4bii	none	5			13				14			
PLE	2b12	4bii	none	6			8				5			
PLE	2b12	4bii	none	7			2				2			
PLE	2b12	4bii	none	8							2			
PLE	2b12	4bii	none	9										
PLE	2b12	4biii	IIA81c	1										
PLE	2b12	4biii	IIA81c	2	587	237								
PLE	2b12	4biii	IIA81c	3	293	119								
PLE	2b12	4biii	IIA81c	4	440	178								
PLE	2b12	4biii	IIA81c	5	2476	74								
PLE	2b12	4biii	IIA81c	6										
PLE	2b12	4biii	IIA81c	7										
PLE	2b12	4biii	IIA81c	8										
PLE	2b12	4biii	IIA81c	9										
PLE	2b12	4biii	IIA81i	1										
PLE	2b12	4biii	IIA81i	2	35	14								
PLE	2b12	4biii	IIA81i	3	18	7								
PLE	2b12	4biii	IIA81i	4	26	11								
PLE	2b12	4biii	IIA81i	5	148	4								
PLE	2b12	4biii	IIA81i	6										
PLE	2b12	4biii	IIA81i	7										
PLE	2b12	4biii	IIA81i	8										
PLE	2b12	4biii	IIA81i	9										
PLE	2b12	4biii	none	1					4				20	
PLE	2b12	4biii	none	2	5		121		305		139		294	
PLE	2b12	4biii	none	3	53		1290		582		1305		505	
PLE	2b12	4biii	none	4	226		320		1490		830		777	
PLE	2b12	4biii	none	5	280		307		553		552		549	
PLE	2b12	4biii	none	6	176		204		232		113		349	
PLE	2b12	4biii	none	7	152		39		81		55		26	
PLE	2b12	4biii	none	8	19		14		33		15		7	
PLE	2b12	4biii	none	9	7		1		8		14		2	
PLE	2b12	4biv	IIA81c	1	1		1		2					
PLE	2b12	4biv	IIA81c	2	2989	579	225		864					
PLE	2b12	4biv	IIA81c	3	2658	289	3653		1309					
PLE	2b12	4biv	IIA81c	4	2610	434	2291		3381					
PLE	2b12	4biv	IIA81c	5	3158	154	1452		1431					
PLE	2b12	4biv	IIA81c	6	1107		973		656					
PLE	2b12	4biv	IIA81c	7	741		407		350					
PLE	2b12	4biv	IIA81c	8	95		172		162					
PLE	2b12	4biv	IIA81c	9	28		26		63					
PLE	2b12	4biv	IIA81e	1										
PLE	2b12	4biv	IIA81e	2							45			
PLE	2b12	4biv	IIA81e	3							710			
PLE	2b12	4biv	IIA81e	4							482			
PLE	2b12	4biv	IIA81e	5							378			
PLE	2b12	4biv	IIA81e	6							36			
PLE	2b12	4biv	IIA81e	7							13			
PLE	2b12	4biv	IIA81e	8							5			
PLE	2b12	4biv	IIA81e	9							1			
PLE	2b12	4biv	IIA81i	1										
PLE	2b12	4biv	IIA81i	2	97	60								
PLE	2b12	4biv	IIA81i	3	48	30								
PLE	2b12	4biv	IIA81i	4	73	45								
PLE	2b12	4biv	IIA81i	5	207	16								
PLE	2b12	4biv	IIA81i	6										
PLE	2b12	4biv	IIA81i	7										
PLE	2b12	4biv	IIA81i	8										
PLE	2b12	4biv	IIA81i	9										
PLE	2b12	4biv	none	1	2				15				25	
PLE	2b12	4biv	none	2	1283		706		1090		625		1304	
PLE	2b12	4biv	none	3	1687		5722		1808		7013		2615	
PLE	2b12	4biv	none	4	2040		1390		3190		4673		4487	
PLE	2b12	4biv	none	5	1901		1137		876		3406		1893	
PLE	2b12	4biv	none	6	1014		749		450		569		1441	

Table 6.3.3.2 continued

PLE	2b12	4biv	none	7	354		133		189		246		213	
PLE	2b12	4biv	none	8	64		53		56		110		66	
PLE	2b12	4biv	none	9	10		4		21		50		35	
PLE	2b2	4aii	IIA81c	1		356	1	5			1	1401		
PLE	2b2	4aii	IIA81c	2	656	6950	149	190	78		74	681		
PLE	2b2	4aii	IIA81c	3	651	327	1288	678	127		167	156		
PLE	2b2	4aii	IIA81c	4	491	212	447	201	274		35	6		
PLE	2b2	4aii	IIA81c	5	249	159	177	9	114		63	5		
PLE	2b2	4aii	IIA81c	6	118		83	1	55		9			
PLE	2b2	4aii	IIA81c	7	68		32	1	26		3			
PLE	2b2	4aii	IIA81c	8	8		10		11		1			
PLE	2b2	4aii	IIA81c	9	1		1		4		1			
PLE	2b2	4aii	none	1			1			223			8	
PLE	2b2	4aii	none	2	906	4753	166		314	1592	138		640	
PLE	2b2	4aii	none	3	586	249	1249		526	221	1246		746	
PLE	2b2	4aii	none	4	316	1344	227		1422	160	469		1087	
PLE	2b2	4aii	none	5	175	249	147		434	14	400		462	
PLE	2b2	4aii	none	6	71		62		188		127		221	
PLE	2b2	4aii	none	7	51		26		83		70		38	
PLE	2b2	4aii	none	8	5		6		48		22		13	
PLE	2b2	4aii	none	9			1		12		22		2	
PLE	2b2	4civ	IIA81f	1										
PLE	2b2	4civ	IIA81f	2										
PLE	2b2	4civ	IIA81f	3			2				2			
PLE	2b2	4civ	IIA81f	4	1		2		1		1			
PLE	2b2	4civ	IIA81f	5	1		1				2			
PLE	2b2	4civ	IIA81f	6	1		1		1		1			
PLE	2b2	4civ	IIA81f	7	2		1		1		1			
PLE	2b2	4civ	IIA81f	8	1		1		1					
PLE	2b2	4civ	IIA81f	9	1				1					
PLE	2b23	4aiii	IIA81d	1										
PLE	2b23	4aiii	IIA81d	2	32		3							
PLE	2b23	4aiii	IIA81d	3	22		37							
PLE	2b23	4aiii	IIA81d	4	15		5							
PLE	2b23	4aiii	IIA81d	5	8		3							
PLE	2b23	4aiii	IIA81d	6	5		1							
PLE	2b23	4aiii	IIA81d	7	3									
PLE	2b23	4aiii	IIA81d	8										
PLE	2b23	4aiii	IIA81d	9										
PLE	2b23	4aiii	none	1			2	38		34			6	
PLE	2b23	4aiii	none	2	2994	4502	371	648	502	1519	219		518	
PLE	2b23	4aiii	none	3	2715	1928	4128	2103	870	191	2030		622	
PLE	2b23	4aiii	none	4	1897	1006	1777	583	2212	141	946		976	
PLE	2b23	4aiii	none	5	994	517	995	29	785	5	469		466	
PLE	2b23	4aiii	none	6	558	8	491	3	315		135		225	
PLE	2b23	4aiii	none	7	378		175	2	147		47		41	
PLE	2b23	4aiii	none	8	45		87		79		25		13	
PLE	2b23	4aiii	none	9	10		15	1	19		9		2	
PLE	2b23	4aiv	IIA81a	1							2	96		
PLE	2b23	4aiv	IIA81a	2							16	67		
PLE	2b23	4aiv	IIA81a	3							42	55		
PLE	2b23	4aiv	IIA81a	4							11			
PLE	2b23	4aiv	IIA81a	5							14			
PLE	2b23	4aiv	IIA81a	6							2			
PLE	2b23	4aiv	IIA81a	7										
PLE	2b23	4aiv	IIA81a	8										
PLE	2b23	4aiv	IIA81a	9										
PLE	2b3	4aii	IIA81c	1			1							
PLE	2b3	4aii	IIA81c	2	13	16	2	9					2	2
PLE	2b3	4aii	IIA81c	3	6	8	1	3					3	1
PLE	2b3	4aii	IIA81c	4	2			2					1	
PLE	2b3	4aii	IIA81c	5										1
PLE	2b3	4aii	IIA81c	6										
PLE	2b3	4aii	IIA81c	7										
PLE	2b3	4aii	IIA81c	8										
PLE	2b3	4aii	IIA81c	9										
PLE	2b3	4aii	none	1			335							
PLE	2b3	4aii	none	2	1818	1730	601	3355					198	132
PLE	2b3	4aii	none	3	958	865	476	1119					223	44
PLE	2b3	4aii	none	4	359		43	746					124	

Table 6.3.3.2 continued

PLE	2b3	4aii	none	5	67		8				45	44
PLE	2b3	4aii	none	6	41		2				35	
PLE	2b3	4aii	none	7			3				10	
PLE	2b3	4aii	none	8			2				5	
PLE	2b3	4aii	none	9			8				5	
PLE	2b3	4bi	none	1	27		122		5		27	
PLE	2b3	4bi	none	2	583		492		473	659	1100	
PLE	2b3	4bi	none	3	1710		2058		1165	1222	1200	
PLE	2b3	4bi	none	4	832		486		1120	1051	949	
PLE	2b3	4bi	none	5	206		239		378	610	643	
PLE	2b3	4bi	none	6	253		76		116	108	488	
PLE	2b3	4bi	none	7	187		106		63	48	136	
PLE	2b3	4bi	none	8	36		80		56	58	28	
PLE	2b3	4bi	none	9	26		21		34	56	8	
PLE	2b3	4d	IIA81g	1								
PLE	2b3	4d	IIA81g	2							60	33
PLE	2b3	4d	IIA81g	3							102	9
PLE	2b3	4d	IIA81g	4							68	
PLE	2b3	4d	IIA81g	5							26	9
PLE	2b3	4d	IIA81g	6							20	
PLE	2b3	4d	IIA81g	7							5	
PLE	2b3	4d	IIA81g	8							3	
PLE	2b3	4d	IIA81g	9							1	
SOL	2b	4ai	none	1								
SOL	2b	4ai	none	2								
SOL	2b	4ai	none	3	1							
SOL	2b	4ai	none	4	1		1					
SOL	2b	4ai	none	5	1		1					
SOL	2b	4ai	none	6	1							
SOL	2b	4ai	none	7								
SOL	2b	4ai	none	8								
SOL	2b	4ai	none	9								
SOL	2b	4aii	IIA81d	1								
SOL	2b	4aii	IIA81d	2	2	1	10		1	8	21	28
SOL	2b	4aii	IIA81d	3	14		39	30	15	7	52	210
SOL	2b	4aii	IIA81d	4	39		18		29	8	24	0
SOL	2b	4aii	IIA81d	5	17		19		11	16	25	3
SOL	2b	4aii	IIA81d	6	16		8		8	3	38	60
SOL	2b	4aii	IIA81d	7	20		2		6	7	7	2
SOL	2b	4aii	IIA81d	8	1		3			4	10	8
SOL	2b	4aii	IIA81d	9			1		2		8	
SOL	2b	4aiv	IIA81c	1								
SOL	2b	4aiv	IIA81c	2	1							0
SOL	2b	4aiv	IIA81c	3	2		1		1			
SOL	2b	4aiv	IIA81c	4	3		10		2			
SOL	2b	4aiv	IIA81c	5	4		15		1	1		0
SOL	2b	4aiv	IIA81c	6	3		10		1			
SOL	2b	4aiv	IIA81c	7	1		4		1			0
SOL	2b	4aiv	IIA81c	8			2					
SOL	2b	4aiv	IIA81c	9								
SOL	2b	4aiv	IIA81d	1								
SOL	2b	4aiv	IIA81d	2								
SOL	2b	4aiv	IIA81d	3								
SOL	2b	4aiv	IIA81d	4								
SOL	2b	4aiv	IIA81d	5								
SOL	2b	4aiv	IIA81d	6								
SOL	2b	4aiv	IIA81d	7								
SOL	2b	4aiv	IIA81d	8								
SOL	2b	4aiv	IIA81d	9								
SOL	2b	4aiv	none	1								
SOL	2b	4aiv	none	2			1		2	1		0
SOL	2b	4aiv	none	3	1		3		5	9	1	
SOL	2b	4aiv	none	4	4		13		14	11	2	
SOL	2b	4aiv	none	5	6		18		16	18	3	0
SOL	2b	4aiv	none	6	6		12		10	7	1	
SOL	2b	4aiv	none	7	2		5		5	14	1	0
SOL	2b	4aiv	none	8			2		3	12		
SOL	2b	4aiv	none	9	1					2	1	
SOL	2b	4av	IIA81c	1								
SOL	2b	4av	IIA81c	2	2							

Table 6.3.3.2 continued

SOL	2b	4av	IIA81c	3	2			1				
SOL	2b	4av	IIA81c	4	1	2		1				
SOL	2b	4av	IIA81c	5	1	4		1				
SOL	2b	4av	IIA81c	6	1	3						
SOL	2b	4av	IIA81c	7		1						
SOL	2b	4av	IIA81c	8								
SOL	2b	4av	IIA81c	9								
SOL	2b	4av	IIA81d	1								
SOL	2b	4av	IIA81d	2								
SOL	2b	4av	IIA81d	3	1							
SOL	2b	4av	IIA81d	4	1	3		1				
SOL	2b	4av	IIA81d	5	2	4						
SOL	2b	4av	IIA81d	6	3	3						
SOL	2b	4av	IIA81d	7	1	1						
SOL	2b	4av	IIA81d	8								
SOL	2b	4av	IIA81d	9								
SOL	2b	4av	none	1								
SOL	2b	4av	none	2	2	1		4		1		
SOL	2b	4av	none	3	11	2		8		15	2	
SOL	2b	4av	none	4	25	17		10		23	4	
SOL	2b	4av	none	5	33	25		6		36	5	
SOL	2b	4av	none	6	28	17		3		18	2	
SOL	2b	4av	none	7	10	5		1		22	2	
SOL	2b	4av	none	8	2	2		1		18		
SOL	2b	4av	none	9	3	1				3	1	
SOL	2b	4ci	none	1								
SOL	2b	4ci	none	2	276	1	27	9	12		3	386
SOL	2b	4ci	none	3	302	61	35	419	36	23	108	0
SOL	2b	4ci	none	4	181	296	9	768	11	367	238	0
SOL	2b	4ci	none	5	168	450		148	2	317	284	26
SOL	2b	4ci	none	6	174	282		92	1	89	122	0
SOL	2b	4ci	none	7	53	119		54		42	85	26
SOL	2b	4ci	none	8	17	49		39		30	16	0
SOL	2b	4ci	none	9	9	1		5		33	48	0
SOL	2b	4cii	none	1								
SOL	2b	4cii	none	2	27	1		1				
SOL	2b	4cii	none	3	34	9		127		3	13	
SOL	2b	4cii	none	4	27	53		335		26	35	
SOL	2b	4cii	none	5	32	80		43		36	46	
SOL	2b	4cii	none	6	32	52		24		17	35	
SOL	2b	4cii	none	7	10	25		10		14	31	
SOL	2b	4cii	none	8	2	9		8		13	10	
SOL	2b	4cii	none	9	3	1		1		9	20	
SOL	2b	4ciii	none	1								
SOL	2b	4ciii	none	2	5							
SOL	2b	4ciii	none	3	5	3		49		1	2	
SOL	2b	4ciii	none	4	6	24		152		9	5	
SOL	2b	4ciii	none	5	8	39		19		12	6	
SOL	2b	4ciii	none	6	16	25		11		6	5	
SOL	2b	4ciii	none	7	5	10		3		3	5	
SOL	2b	4ciii	none	8	1	4		3		3	2	
SOL	2b	4ciii	none	9	2	1				3	3	
SOL	2b	4civ	none	1								
SOL	2b	4civ	none	2								
SOL	2b	4civ	none	3								
SOL	2b	4civ	none	4								
SOL	2b	4civ	none	5		1						
SOL	2b	4civ	none	6								
SOL	2b	4civ	none	7								
SOL	2b	4civ	none	8								
SOL	2b	4civ	none	9								
SOL	2b	4d	none	1								
SOL	2b	4d	none	2						13		7
SOL	2b	4d	none	3		1		54		6	4	5
SOL	2b	4d	none	4		8		66		6	10	
SOL	2b	4d	none	5		13		4		11	12	1
SOL	2b	4d	none	6		8		4		2	4	
SOL	2b	4d	none	7		3		1		6	2	
SOL	2b	4d	none	8		1				3		
SOL	2b	4d	none	9							1	

Table 6.3.3.2 continued

SOL	2b	4e	none	1					
SOL	2b	4e	none	2					
SOL	2b	4e	none	3					
SOL	2b	4e	none	4					
SOL	2b	4e	none	5					
SOL	2b	4e	none	6					
SOL	2b	4e	none	7					
SOL	2b	4e	none	8					
SOL	2b	4e	none	9					
SOL	2b	none	none	1					
SOL	2b	none	none	2	305	7	24		
SOL	2b	none	none	3	342	106	190	10	52
SOL	2b	none	none	4	229	327	306	71	130
SOL	2b	none	none	5	232	455	70	90	161
SOL	2b	none	none	6	296	309	33	44	87
SOL	2b	none	none	7	90	187	39	27	64
SOL	2b	none	none	8	19	53	33	19	20
SOL	2b	none	none	9	26	16	5	9	39
SOL	2b1	4aii	none	1					
SOL	2b1	4aii	none	2		2			
SOL	2b1	4aii	none	3	5	1			
SOL	2b1	4aii	none	4	9	1			
SOL	2b1	4aii	none	5	11				
SOL	2b1	4aii	none	6	12				
SOL	2b1	4aii	none	7	5				
SOL	2b1	4aii	none	8					
SOL	2b1	4aii	none	9	2				
SOL	2b1	4aiii	IIA81a	1					
SOL	2b1	4aiii	IIA81a	2					
SOL	2b1	4aiii	IIA81a	3				4	
SOL	2b1	4aiii	IIA81a	4				6	
SOL	2b1	4aiii	IIA81a	5				11	
SOL	2b1	4aiii	IIA81a	6				4	
SOL	2b1	4aiii	IIA81a	7				13	
SOL	2b1	4aiii	IIA81a	8				12	
SOL	2b1	4aiii	IIA81a	9				1	
SOL	2b1	4aiii	IIA81d	1					
SOL	2b1	4aiii	IIA81d	2		2	1		
SOL	2b1	4aiii	IIA81d	3		2	1		
SOL	2b1	4aiii	IIA81d	4		2	1		
SOL	2b1	4aiii	IIA81d	5		2			
SOL	2b1	4aiii	IIA81d	6		1			
SOL	2b1	4aiii	IIA81d	7					
SOL	2b1	4aiii	IIA81d	8					
SOL	2b1	4aiii	IIA81d	9					
SOL	2b1	4aiii	IIa81l	1					
SOL	2b1	4aiii	IIa81l	2					
SOL	2b1	4aiii	IIa81l	3					
SOL	2b1	4aiii	IIa81l	4					
SOL	2b1	4aiii	IIa81l	5				1	
SOL	2b1	4aiii	IIa81l	6					
SOL	2b1	4aiii	IIa81l	7				1	
SOL	2b1	4aiii	IIa81l	8				1	
SOL	2b1	4aiii	IIa81l	9					
SOL	2b1	4aiii	none	1					
SOL	2b1	4aiii	none	2		35	49	2	
SOL	2b1	4aiii	none	3	11	28	67	24	
SOL	2b1	4aiii	none	4	20	33	36	27	1
SOL	2b1	4aiii	none	5	25	22	22	45	1
SOL	2b1	4aiii	none	6	26	15	8	17	1
SOL	2b1	4aiii	none	7	11	8	10	44	
SOL	2b1	4aiii	none	8	1	2	9	39	
SOL	2b1	4aiii	none	9	4	1	3	5	
SOL	2b1	4aiv	IIA81a	1					
SOL	2b1	4aiv	IIA81a	2					
SOL	2b1	4aiv	IIA81a	3					
SOL	2b1	4aiv	IIA81a	4				1	
SOL	2b1	4aiv	IIA81a	5				1	
SOL	2b1	4aiv	IIA81a	6					
SOL	2b1	4aiv	IIA81a	7				2	

Table 6.3.3.2 continued

SOL	2b1	4aiv	IIA81a	8							2			
SOL	2b1	4aiv	IIA81a	9										
SOL	2b1	4av	IIA81a	1										
SOL	2b1	4av	IIA81a	2										
SOL	2b1	4av	IIA81a	3										
SOL	2b1	4av	IIA81a	4										
SOL	2b1	4av	IIA81a	5										
SOL	2b1	4av	IIA81a	6										
SOL	2b1	4av	IIA81a	7										
SOL	2b1	4av	IIA81a	8										
SOL	2b1	4av	IIA81a	9										
SOL	2b1	4av	IIA81j	1										
SOL	2b1	4av	IIA81j	2										
SOL	2b1	4av	IIA81j	3							1			
SOL	2b1	4av	IIA81j	4							1			
SOL	2b1	4av	IIA81j	5							1			
SOL	2b1	4av	IIA81j	6										
SOL	2b1	4av	IIA81j	7							1			
SOL	2b1	4av	IIA81j	8							1			
SOL	2b1	4av	IIA81j	9										
SOL	2b1	none	none	1										
SOL	2b1	none	none	2										
SOL	2b1	none	none	3										
SOL	2b1	none	none	4										
SOL	2b1	none	none	5										
SOL	2b1	none	none	6										
SOL	2b1	none	none	7										
SOL	2b1	none	none	8										
SOL	2b1	none	none	9										
SOL	2b12	4bi	none	1	863	507	231	2679	1042	2228	5711	7977	258	352
SOL	2b12	4bi	none	2	29935	13994	13411	16070	6173	4421	6733	2136	34708	6572
SOL	2b12	4bi	none	3	14795	1923	42233	4634	19397	4828	8415	1150	8814	771
SOL	2b12	4bi	none	4	14523	387	7152	734	24422	1749	8834	915	5133	243
SOL	2b12	4bi	none	5	4223	41	5909	673	3255	179	8888	170	4468	36
SOL	2b12	4bi	none	6	3113	33	1594		3107	125	862	213	4177	50
SOL	2b12	4bi	none	7	2116	7	730	2	1136	53	551	25	522	32
SOL	2b12	4bi	none	8	270		681		502	63	273	1	492	
SOL	2b12	4bi	none	9	86		251		620	45	219	1	290	
SOL	2b12	4bii	none	1										
SOL	2b12	4bii	none	2										
SOL	2b12	4bii	none	3										
SOL	2b12	4bii	none	4										
SOL	2b12	4bii	none	5										
SOL	2b12	4bii	none	6										
SOL	2b12	4bii	none	7										
SOL	2b12	4bii	none	8										
SOL	2b12	4bii	none	9										
SOL	2b12	4biii	IIA81c	1										
SOL	2b12	4biii	IIA81c	2			3							
SOL	2b12	4biii	IIA81c	3	2		13							
SOL	2b12	4biii	IIA81c	4	7		9							
SOL	2b12	4biii	IIA81c	5			11							
SOL	2b12	4biii	IIA81c	6	4		9							
SOL	2b12	4biii	IIA81c	7	3		4							
SOL	2b12	4biii	IIA81c	8			3							
SOL	2b12	4biii	IIA81c	9			2							
SOL	2b12	4biii	IIA81i	1										
SOL	2b12	4biii	IIA81i	2			1							
SOL	2b12	4biii	IIA81i	3	1		2							
SOL	2b12	4biii	IIA81i	4	4		2							
SOL	2b12	4biii	IIA81i	5			2							
SOL	2b12	4biii	IIA81i	6	2		2							
SOL	2b12	4biii	IIA81i	7	2		1							
SOL	2b12	4biii	IIA81i	8			1							
SOL	2b12	4biii	IIA81i	9										
SOL	2b12	4biii	none	1										
SOL	2b12	4biii	none	2			6		3					
SOL	2b12	4biii	none	3			3		8		2			
SOL	2b12	4biii	none	4			3		7		2			
SOL	2b12	4biii	none	5			1		3		2			

Table 6.3.3.2 continued

SOL	2b12	4biii	none	6	1		1		1		1			
SOL	2b12	4biii	none	7					2		2			
SOL	2b12	4biii	none	8					2		1			
SOL	2b12	4biii	none	9										
SOL	2b12	4biv	IIA81c	1										
SOL	2b12	4biv	IIA81c	2	2		34		5					
SOL	2b12	4biv	IIA81c	3	5		16		8					
SOL	2b12	4biv	IIA81c	4	16		11		16					
SOL	2b12	4biv	IIA81c	5	25		9		20					
SOL	2b12	4biv	IIA81c	6	41		6		12					
SOL	2b12	4biv	IIA81c	7	12		2		5					
SOL	2b12	4biv	IIA81c	8	1				3					
SOL	2b12	4biv	IIA81c	9	5				1					
SOL	2b12	4biv	none	1										
SOL	2b12	4biv	none	2	1		24		9		1			
SOL	2b12	4biv	none	3	8		16		13		7		2	
SOL	2b12	4biv	none	4	14		15		5		18		4	
SOL	2b12	4biv	none	5	20		10		4		26		6	
SOL	2b12	4biv	none	6	20		6		1		13		5	
SOL	2b12	4biv	none	7	7		3		2		11		5	
SOL	2b12	4biv	none	8	1		1		2		8		2	
SOL	2b12	4biv	none	9	3				1		2		4	
SOL	2b12	4d	IIA81g	1										
SOL	2b12	4d	IIA81g	2							69		116	
SOL	2b12	4d	IIA81g	3							28		240	429
SOL	2b12	4d	IIA81g	4							32		97	
SOL	2b12	4d	IIA81g	5							59		101	
SOL	2b12	4d	IIA81g	6							8		166	107
SOL	2b12	4d	IIA81g	7							32		34	
SOL	2b12	4d	IIA81g	8							14		37	
SOL	2b12	4d	IIA81g	9									33	
SOL	2b2	4aii	IIA81c	1							1	2		
SOL	2b2	4aii	IIA81c	2	15	6	20	4	1		8		21	38
SOL	2b2	4aii	IIA81c	3	35		76	53	21		16		56	134
SOL	2b2	4aii	IIA81c	4	89	1	60		53		23		26	1
SOL	2b2	4aii	IIA81c	5	45	4	79		31		13		27	5
SOL	2b2	4aii	IIA81c	6	45		42		21		8		44	36
SOL	2b2	4aii	IIA81c	7	39	1	14		12		3		8	2
SOL	2b2	4aii	IIA81c	8	4		10		2		2		11	5
SOL	2b2	4aii	IIA81c	9		1	1		3				10	
SOL	2b2	4aii	none	1										
SOL	2b2	4aii	none	2	29	1	24	8	1		4		12	53
SOL	2b2	4aii	none	3	66		85	15	19		5		32	84
SOL	2b2	4aii	none	4	127		65		50		18		23	0
SOL	2b2	4aii	none	5	89	8	76		23		27		26	6
SOL	2b2	4aii	none	6	86		43		17		11		25	23
SOL	2b2	4aii	none	7	70	3	15		7		8		6	3
SOL	2b2	4aii	none	8	8		10		1		4		5	3
SOL	2b2	4aii	none	9	1		1		2				6	
SOL	2b2	4civ	IIA81f	1										
SOL	2b2	4civ	IIA81f	2										
SOL	2b2	4civ	IIA81f	3										
SOL	2b2	4civ	IIA81f	4										
SOL	2b2	4civ	IIA81f	5										
SOL	2b2	4civ	IIA81f	6										
SOL	2b2	4civ	IIA81f	7										
SOL	2b2	4civ	IIA81f	8										
SOL	2b2	4civ	IIA81f	9										
SOL	2b23	4aiii	none	1										
SOL	2b23	4aiii	none	2	24									
SOL	2b23	4aiii	none	3	25		4		11		1		4	
SOL	2b23	4aiii	none	4	20		51		24		12		9	
SOL	2b23	4aiii	none	5	22	23	83		15		13		10	
SOL	2b23	4aiii	none	6	16	11	54		10		6		4	
SOL	2b23	4aiii	none	7	5		19		3		2		3	
SOL	2b23	4aiii	none	8	2		8		2		1		1	
SOL	2b23	4aiii	none	9			1						2	
SOL	2b3	4aii	IIA81c	1										
SOL	2b3	4aii	IIA81c	2										0
SOL	2b3	4aii	IIA81c	3									1	

Table 6.3.3.2 continued

SOL	2b3	4aii	IIA81c	4						
SOL	2b3	4aii	IIA81c	5						
SOL	2b3	4aii	IIA81c	6						
SOL	2b3	4aii	IIA81c	7						
SOL	2b3	4aii	IIA81c	8						
SOL	2b3	4aii	IIA81c	9						
SOL	2b3	4bi	none	1		297	111	145	27	21
SOL	2b3	4bi	none	2	2588	1308	1564	1712	2353	69
SOL	2b3	4bi	none	3	2217	2515	1573	1342	2509	106
SOL	2b3	4bi	none	4	1642	1060	1713	1289	1042	
SOL	2b3	4bi	none	5	884	1432	420	1131	541	
SOL	2b3	4bi	none	6	474	451	274	555	708	
SOL	2b3	4bi	none	7	230	112	213	473	265	
SOL	2b3	4bi	none	8	117	127	101	189	330	
SOL	2b3	4bi	none	9	18	42	51	101	152	
SOL	2b3	4d	IIA81g	1						
SOL	2b3	4d	IIA81g	2					68	146
SOL	2b3	4d	IIA81g	3					1124	112
SOL	2b3	4d	IIA81g	4					633	
SOL	2b3	4d	IIA81g	5					245	
SOL	2b3	4d	IIA81g	6					808	0
SOL	2b3	4d	IIA81g	7					188	
SOL	2b3	4d	IIA81g	8					165	
SOL	2b3	4d	IIA81g	9					68	

6.3.4. Trend in catch estimates in weight and numbers at age by derogation in management area 2c: Irish Sea

Table 6.3.4.1 lists the landings and available discards for the main species by derogations. For the reason of space limitation of this report, the following sections represent the landings and discards by derogation in weight and numbers for monkfish (ANF), cod (COD), haddock (HAD), hake, (HKE), Nephrops (NEP), plaice (PLE), saithe (POK), sole (SOL), and whiting (WHG). However, additional data queries for other species can be provided depending on data provisions of the national catches by the experts or national institutes. The data given in the table forms the basis of Figure 6.3.4.1 displaying the relative catch compositions by derogations for the years 2003-2007. Lack of discards within these figures indicates a lack of information rather than zero discards. Discard information available within the Irish Sea is incomplete. For demersal trawl gear, data is not available for all species, years, derogations or special conditions. It is also the case that discards are not available for all species within a single gear grouping, for example the lack of whiting but presence of cod and haddock discards within 4.a.iv. Discards for the beam trawl 4b.i category were the most complete with discards available for 6 species from 2004-2007. Landings within special conditions are aggregated from vessels assessed to be eligible for the special condition. However, eligible vessels in this area may not necessarily have taken up the condition which may explain higher levels of cod than would have been expected within special condition IIA.8.c and IIA.8.d.

The primary gear categories landing from the Irish Sea are discussed below. As a first note, cod area misreporting is known to be an issue for Ireland within this area, with ICES division VIIg cod catches being reported into the southern Irish Sea. This primarily relates to gillnet and otter trawl gear types. The misreporting in VIIa results from a restrictive VIIe-k quota. Although this has been occurring for a number of years ranging from 54 t to 108 t from 2004-2006, during 2007 misreporting was a particular issue. The WGSSDS (ICES, 2008) estimated

514 t of cod reported into three southern Irish Sea ICES statistical rectangles was caught in VIIg. This has not been corrected for within the data provided to the group.

Landings from the Irish Sea increased in 2007 with landings above those of 2003 levels, ending the previous declining trend. Much of this increase can be attributed to increased *Nephrops* landings, the primary species within the Irish Sea. Overall, compared to 2006 cod landings increased by 30%, whilst plaice and sole both declined (18% and 11%, respectively) (Table 6.3.4.1). When compared relative to 2003 landings, cod remained very similar, plaice halved, and sole declined by 41%.

Gear category 4.a, demersal trawl and seining, is by far the dominant fishing activity within the Irish Sea in relation to landings. This is primarily within category 4a.ii (70-89mm mesh), containing 66-80% of total annual landings. Whilst category contains 4a.iv (100-1119mm) 9-16%, category 4a.iii (90-99mm) and 4a.v (≥120mm) each contain <1% of total landings.

Category 4a.ii: The main species caught within this category is *Nephrops*. The other components, at comparatively low levels, include cod and haddock, plaice, and anglerfish in addition to lesser quantities of sole. In 2007 this category accounted for the greatest proportion of cod landings (39%), while earlier in the time series the majority of cod was take by 4a.iv (100-119mm). The majority of plaice also originates from this category (18-48%) having previously been within 4b.i (80-89mm). Only 4-11% of sole originates from this category. A proportion for landings are allocated to special condition IIA8.1.d, around 35%, (Table 6.3.4.1) requiring a track record of less than 5% cod, plaice and sole. Around 7% is allocated to special condition IIA.8.c, requiring a track record of less than 5% cod. The species compositions of these two special conditions are very similar to that without special condition. IIA.8.c shows slightly greater plaice proportions, whilst IIA.8.d indicates greater *Nephrops* to that without special condition (Figure 6.3.4.1). Discard data is limited, only available for cod and haddock within special condition IIA.8.d. Cod discarding prior to 2007 was less than 50 t annually (~35%). In 2007 however this was much higher, over 200 t (77%). Haddock discards were at the lowest level of the time series in 2007, at just 52t (42%). Prior to this, discards have been between 88 t and 293 t (65-85%), with the greatest discarding occurring during 2005.

Category 4a.iii (90-99mm) contains limited landings (<70t/yr). This gear had previously been dominated by plaice landings however this has now shifted to *Nephrops*. It is not possible to determine species compositional differences between the landings of special conditions and no special conditions due to the low landings.

Category 4a.iv: The species composition of this larger mesh size category is very different to 4a.ii. Landings primarily consist of haddock and cod. 4a.iv had previously accounted for the greatest proportion of cod landings, however in 2007 this proportion fell to 28%, below that of 4a.ii. Hake, plaice, and whiting are also landed, the quantities of which very annually. *Nephrops* contributes a very small proportion to this category, around 2%. The majority of landings within this category are not assigned to a special condition, although two are present, IIA.8.c and IIA.8.d. Species composition is quite different in IIA.8.c compared to landings from no special condition, with very little cod in the previous two years, consisting primarily haddock with quantities of plaice (Figure 6.3.4.1). The composition of IIA.8.d however is similar to that with no special condition, with high proportions of haddock and cod, and presence of hake. Unlike no special condition, IIA.8.d contains little plaice and virtually no whiting in recent years. It is likely many vessels qualifying for this special condition have not taken it up, given the high proportion of cod. Discard information is limited within this category. Cod and haddock discards are available for special condition IIAa.8.d for 2003 to 2006. There is very little discarding of cod within this special condition, <5 t annually (≤4%), although higher in 2004 at around 45 t (22%). A similar higher level of discarding was observed for haddock in 2004 (81%). Haddock discards appear to remain around, or less than 100 t (<55%).

Category 4a.v: There is a deal of variability within the species composition of this category, likely to result from the low annual landings.

In addition to demersal trawl and seine gear within the Irish Sea, beam trawls are also employed, almost solely 4b.i the 80-89mm mesh category. Belgium (and the Netherlands) beam trawls are assumed to have used the minimum mesh size group 80-89mm 4.b.i (sec. 5.5.2), no assumptions are made for the remaining nations. There are no special conditions relating to this category. The overall species composition of this category is stable, dominated by plaice (29-38%) and sole (38-43%), with relatively consistent annual proportions (Figure6.3.4.1). In addition, lower and more variable proportions of anglerfish, cod, and haddock occur annually. This category contributes 8-16% of cod, 36-57% of plaice, and 76-93% of sole to the total annual landings for each respective species. Discard information available for this category is greater than for any other category within the Irish Sea, covering cod, haddock, plaice, sole, anglerfish and whiting from 2004 to 2007. Plaice discarding occurs at a rate of between 24-32%, constituting the greatest quantities of the data available. The quantity has been declining in recent years, with little impact on the discard rate. Sole has a low discard rate, of ≤5%, peaking at 37 t in 2005, and just 13 t in 2007. Anglerfish discarding is similar, at a very low rate, just 1-2%. Cod discarding occurs at a rate of 11-17% and indicates a grater rate in 2007 to that of 2006. Haddock indicates relatively consistent discarding rates of between 30% and 37%, as does whiting 46-47%), however, neither of this species is caught well by this gear category with low landings and discards.

Species composition within the 'none none' category, has varied, previously dominated by *Nephrops*, shifting to plaice and sole in 2005. Proportions of cod and haddock have remained consistent throughout the period. The proportion of anglerfish increased in 2007, from 7% and 9% to 20%. Landings totalled ~200 t in 2007, constituting a very small proportion of total Irish Sea landings.

One further note, although gillnet landings are low within the Irish Sea, largely attributed to category 4c.iii (150-219mm), these are primarily of cod. Landings have increased in the last two years from <50t/yr previously to over 300 t in 2007 (Figure 6.3.4.1), equating to 26% of total cod landings. No discard data available for the gillnet groupings.

The ToR request landings and discards at age by derogation of cod, plaice and sole. The data is presented in Table 6.3.4.2 and the values are illustrated in Figure 6.3.4.2-4. Additional species specific data queries could be provided on request depending on data provisions by the experts or national institutes.

Cod aged information shows within 4a.ii with special condition IIA.8.d landings are recorded from age 1 to 5, however the majority landed are age 2 (Figure 6.3.4.2). Indicating exploitation in the Irish Sea primarily occurs at age 2. Although there is some annual variation in numbers, the numbers are fairly consistent for all but age 2 where there is greater variability. In relation to discards, the majority occurs at age 1, with vast numbers being discarded annually. This is much reduced once cod are age 2, with the exception of vast discarding at this age in 2007. The same pattern is seen in 4a.ii none and 4a.iv IIA.8.d, although no landing or discard at age data was available for 2007. Limited information is available for the remaining gear types.

Plaice within 4a.ii are landed from age 1, at low levels, up to and beyond age 9, also at low levels (Figure 6.3.4.3). The majority of plaice of which are aged 3-6 and in some instances age 2. There does not appear to be differences in the age structure of landings between special conditions and no special condition. There is a slight difference in the age structure for the larger mesh 4a.iv category, with no plaice recorded at age 1. There also appears to be fewer numbers of plaice within 4a.iv, particularly within recent years. No discard information was available for this species within this gear.

Beam trawl category 4b.i is the only gear category with annual age data available for sole landings (Figure 6.3.4.4). No discard age data is available. In most years the minimum landing age for sole is 2, although this was age 1 in 2006. Ages extend up to and likely beyond age 9 with the majority occurring coming from ages 2-6, particularly age 3. In the last two years numbers of ages 2-6 are below those of the previous period.

Table 6.3.4.1 Irish Sea. Landings (t), discards (t) and relative discard rates by species and derogation, 2003-2007.

REG_AREA	SPECIES	YEAR	REG_GEAR	SPECON	LANDINGS	DISCARDS	DISC RATE BY GEAR
2c	ANF	2003	4aii	IIA81c	29		
2c	ANF	2003	4aii	IIA81d	62		
2c	ANF	2003	4aii	none	162		
2c	ANF	2003	4aiii	none	4		
2c	ANF	2003	4aiv	IIA81c	3		
2c	ANF	2003	4aiv	IIA81d	17		
2c	ANF	2003	4aiv	IIA81k	1		
2c	ANF	2003	4aiv	none	102		
2c	ANF	2003	4av	none	1		
2c	ANF	2003	4bi	none	208		
2c	ANF	2003	4biii	none	15		
2c	ANF	2003	4cii	none	2		
2c	ANF	2003	4ciii	none	2		
2c	ANF	2003	none	none	21		
2c	ANF	2004	4aii	IIA81c	25		
2c	ANF	2004	4aii	IIA81d	75		
2c	ANF	2004	4aii	none	153		
2c	ANF	2004	4aiii	none	3		
2c	ANF	2004	4aiv	IIA81c	4		
2c	ANF	2004	4aiv	IIA81d	27		
2c	ANF	2004	4aiv	IIA81k	8		
2c	ANF	2004	4aiv	none	54		
2c	ANF	2004	4av	IIA81d	16		
2c	ANF	2004	4av	none	14		
2c	ANF	2004	4bi	none	169	1	
2c	ANF	2004	4biii	none	1		
2c	ANF	2004	4cii	none	2		
2c	ANF	2004	4ciii	none	1		
2c	ANF	2004	none	none	64		
2c	ANF	2005	4aii	IIA81c	24		
2c	ANF	2005	4aii	IIA81d	51		
2c	ANF	2005	4aii	none	138		
2c	ANF	2005	4aiii	none	6		
2c	ANF	2005	4aiv	IIA81c	1		
2c	ANF	2005	4aiv	IIA81d	11		
2c	ANF	2005	4aiv	none	41		
2c	ANF	2005	4bi	none	171	4	0.02
2c	ANF	2005	4bii	none	1		
2c	ANF	2005	4biii	none	3		
2c	ANF	2005	4ci	none	4		
2c	ANF	2005	none	none	7		
2c	ANF	2006	4aii	IIA81c	21		
2c	ANF	2006	4aii	IIA81d	54		
2c	ANF	2006	4aii	none	165		
2c	ANF	2006	4aiii	none	2		
2c	ANF	2006	4aiv	IIA81c	2		
2c	ANF	2006	4aiv	IIA81d	6		
2c	ANF	2006	4aiv	none	28		
2c	ANF	2006	4bi	none	119	2	0.01
2c	ANF	2006	4cii	none	2		
2c	ANF	2006	4ciii	none	2		
2c	ANF	2006	none	none	5		
2c	ANF	2007	4aii	IIA81c	15		
2c	ANF	2007	4aii	IIA81d	60		
2c	ANF	2007	4aii	none	180		
2c	ANF	2007	4aiii	none	10		
2c	ANF	2007	4aiv	IIA81c	1		
2c	ANF	2007	4aiv	IIA81d	3		
2c	ANF	2007	4aiv	none	18		
2c	ANF	2007	4bi	none	108	1	0.01
2c	ANF	2007	4bii	none	4		
2c	ANF	2007	none	none	39		
2c	COD	2003	4aii	IIA81c	42		
2c	COD	2003	4aii	IIA81d	77	9	0.11
2c	COD	2003	4aii	none	298	3	0.01
2c	COD	2003	4aiii	none	1		0.03
2c	COD	2003	4aiv	IIA81c	24		
2c	COD	2003	4aiv	IIA81d	98	4	0.04

Table 6.3.4.1 continued

REG_AREA	SPECIES	YEAR	REG_GEAR	SPECON	LANDINGS	DISCARDS	DISC RATE BY GEAR
2c	COD	2003	4aiv	none	432		
2c	COD	2003	4av	IIA81d	2		
2c	COD	2003	4av	none	13		
2c	COD	2003	4bi	none	199		
2c	COD	2003	4bii	none	3		
2c	COD	2003	4biii	none	25		
2c	COD	2003	4ci	none	4		
2c	COD	2003	4cii	none	10		
2c	COD	2003	4ciii	none	13		
2c	COD	2003	4e	none	1		
2c	COD	2003	none	none	19		
2c	COD	2004	4aii	IIA81c	37		
2c	COD	2004	4aii	IIA81d	101	53	0.35
2c	COD	2004	4aii	none	256	113	0.31
2c	COD	2004	4aiii	none	3		
2c	COD	2004	4aiv	IIA81c	41		
2c	COD	2004	4aiv	IIA81d	163	46	0.22
2c	COD	2004	4aiv	none	239		
2c	COD	2004	4av	none	1		
2c	COD	2004	4bi	none	116	25	0.17
2c	COD	2004	4biii	none	1		
2c	COD	2004	4cii	none	27		
2c	COD	2004	4ciii	none	26		
2c	COD	2004	4e	none	1		
2c	COD	2004	none	none	91		
2c	COD	2005	4aii	IIA81c	47		
2c	COD	2005	4aii	IIA81d	85	52	0.38
2c	COD	2005	4aii	none	236	29	0.11
2c	COD	2005	4aiii	none	2		
2c	COD	2005	4aiv	IIA81c	9		
2c	COD	2005	4aiv	IIA81d	161	2	0.01
2c	COD	2005	4aiv	none	203		
2c	COD	2005	4av	none	1		
2c	COD	2005	4bi	none	147	28	0.16
2c	COD	2005	4biii	none	1		
2c	COD	2005	4ci	none	49		
2c	COD	2005	4cii	none	1		
2c	COD	2005	4e	none	2		
2c	COD	2005	none	none	4		
2c	COD	2006	4aii	IIA81c	41		
2c	COD	2006	4aii	IIA81d	66	29	0.31
2c	COD	2006	4aii	none	196		
2c	COD	2006	4aiii	none	2		
2c	COD	2006	4aiv	IIA81c	1		
2c	COD	2006	4aiv	IIA81d	199	3	0.01
2c	COD	2006	4aiv	none	214		
2c	COD	2006	4av	none	25		
2c	COD	2006	4bi	none	76	9	0.11
2c	COD	2006	4cii	none	8		
2c	COD	2006	4ciii	none	95		
2c	COD	2006	4e	none	3		
2c	COD	2006	none	none	9		
2c	COD	2007	4aii	IIA81c	21		
2c	COD	2007	4aii	IIA81d	70	230	0.77
2c	COD	2007	4aii	none	320		
2c	COD	2007	4aiii	none	3	6	0.66
2c	COD	2007	4aiv	IIA81c	1		
2c	COD	2007	4aiv	IIA81d	161		
2c	COD	2007	4aiv	none	177		
2c	COD	2007	4bi	none	105	20	0.16
2c	COD	2007	4bii	none	2		
2c	COD	2007	4cii	none	15		
2c	COD	2007	4ciii	none	312		
2c	COD	2007	4e	none	1		
2c	COD	2007	none	none	23		
2c	HAD	2003	4aii	IIA81c	22		
2c	HAD	2003	4aii	IIA81d	52	96	0.65
2c	HAD	2003	4aii	none	171		
2c	HAD	2003	4aiii	none	4	10	0.75

Table 6.3.4.1 continued

REG_AREA	SPECIES	YEAR	REG_GEAR	SPECON	LANDINGS	DISCARDS	DISC RATE BY GEAR
2c	HAD	2003	4aiv	IIA81c	18		
2c	HAD	2003	4aiv	IIA81d	69	81	0.54
2c	HAD	2003	4aiv	none	258	312	0.55
2c	HAD	2003	4av	none	1		
2c	HAD	2003	4bi	none	32		
2c	HAD	2003	4biii	none	2		
2c	HAD	2003	4cii	none	1		
2c	HAD	2003	4ciii	none	2		
2c	HAD	2003	none	none	15		
2c	HAD	2004	4aii	IIA81c	25		
2c	HAD	2004	4aii	IIA81d	58	144	0.71
2c	HAD	2004	4aii	none	179	435	0.71
2c	HAD	2004	4aiii	none	1		0.03
2c	HAD	2004	4aiv	IIA81c	45		
2c	HAD	2004	4aiv	IIA81d	127	525	0.81
2c	HAD	2004	4aiv	IIA81k	1		
2c	HAD	2004	4aiv	none	194	65	0.25
2c	HAD	2004	4bi	none	24	13	0.34
2c	HAD	2004	4cii	none	5		
2c	HAD	2004	4ciii	none	1		
2c	HAD	2004	none	none	67		
2c	HAD	2005	4aii	IIA81c	17		
2c	HAD	2005	4aii	IIA81d	50	293	0.85
2c	HAD	2005	4aii	none	119	235	0.66
2c	HAD	2005	4aiii	none	1		
2c	HAD	2005	4aiv	IIA81c	22		
2c	HAD	2005	4aiv	IIA81d	125	116	0.48
2c	HAD	2005	4aiv	none	155		
2c	HAD	2005	4av	none	1		
2c	HAD	2005	4bi	none	33	18	0.36
2c	HAD	2005	4ci	none	2		
2c	HAD	2005	4cii	none	1		
2c	HAD	2005	none	none	5		
2c	HAD	2006	4aii	IIA81c	17		
2c	HAD	2006	4aii	IIA81d	48	88	0.65
2c	HAD	2006	4aii	none	102		
2c	HAD	2006	4aiii	none	2		
2c	HAD	2006	4aiv	IIA81c	144		
2c	HAD	2006	4aiv	IIA81d	76	17	0.18
2c	HAD	2006	4aiv	none	221		
2c	HAD	2006	4av	IIA81c	1		
2c	HAD	2006	4av	none	7		
2c	HAD	2006	4bi	none	27	16	0.37
2c	HAD	2006	4ciii	none	5		
2c	HAD	2006	none	none	4		
2c	HAD	2007	4aii	IIA81c	21		
2c	HAD	2007	4aii	IIA81d	60	52	0.46
2c	HAD	2007	4aii	none	343		
2c	HAD	2007	4aiii	none	2		
2c	HAD	2007	4aiv	IIA81c	128		
2c	HAD	2007	4aiv	IIA81d	249		
2c	HAD	2007	4aiv	none	206		
2c	HAD	2007	4av	IIA81c	7		
2c	HAD	2007	4bi	none	31	13	0.3
2c	HAD	2007	4bii	none	1		
2c	HAD	2007	4ciii	none	11		
2c	HAD	2007	none	none	24		
2c	HKE	2003	4aii	IIA81c	9		
2c	HKE	2003	4aii	IIA81d	14		
2c	HKE	2003	4aii	none	32		
2c	HKE	2003	4aiv	IIA81c	21		
2c	HKE	2003	4aiv	IIA81d	56		
2c	HKE	2003	4aiv	none	124		
2c	HKE	2003	4bi	none	4		
2c	HKE	2003	4cii	none	3		
2c	HKE	2003	4ciii	none	5		
2c	HKE	2003	none	none	1		
2c	HKE	2004	4aii	IIA81c	13		
2c	HKE	2004	4aii	IIA81d	31		

Table 6.3.4.1 continued

REG_AREA	SPECIES	YEAR	REG_GEAR	SPECON	LANDINGS	DISCARDS	DISC RATE BY GEAR
2c	HKE	2004	4aii	none	42		
2c	HKE	2004	4aiv	IIA81c	18		
2c	HKE	2004	4aiv	IIA81d	101		
2c	HKE	2004	4aiv	none	112		
2c	HKE	2004	4bi	none	4		
2c	HKE	2004	4cii	none	4		
2c	HKE	2004	4ciii	none	2		
2c	HKE	2004	none	none	4		
2c	HKE	2005	4aii	IIA81c	15		
2c	HKE	2005	4aii	IIA81d	29		
2c	HKE	2005	4aii	none	53		
2c	HKE	2005	4aiii	none	1		
2c	HKE	2005	4aiv	IIA81c	7		
2c	HKE	2005	4aiv	IIA81d	80		
2c	HKE	2005	4aiv	none	118		
2c	HKE	2005	4av	none	3		
2c	HKE	2005	4bi	none	6		
2c	HKE	2005	4ci	none	3		
2c	HKE	2005	4cii	none	1		
2c	HKE	2005	none	none	1		
2c	HKE	2006	4aii	IIA81c	9		
2c	HKE	2006	4aii	IIA81d	20		
2c	HKE	2006	4aii	none	29		
2c	HKE	2006	4aiv	IIA81c	4		
2c	HKE	2006	4aiv	IIA81d	76		
2c	HKE	2006	4aiv	none	93		
2c	HKE	2006	4bi	none	3		0.01
2c	HKE	2006	4cii	none	1		
2c	HKE	2006	4ciii	none	4		
2c	HKE	2007	4aii	IIA81c	7		
2c	HKE	2007	4aii	IIA81d	20		
2c	HKE	2007	4aii	none	39		
2c	HKE	2007	4aiii	none	1		
2c	HKE	2007	4aiv	IIA81c	1		
2c	HKE	2007	4aiv	IIA81d	50		
2c	HKE	2007	4aiv	none	30		
2c	HKE	2007	4bi	none	4		
2c	HKE	2007	4bii	none	1		
2c	HKE	2007	4ciii	none	5		
2c	HKE	2007	none	none	1		
2c	NEP	2003	4aii	IIA81c	800		
2c	NEP	2003	4aii	IIA81d	2276		
2c	NEP	2003	4aii	none	4108		
2c	NEP	2003	4aiii	IIA81d	1		
2c	NEP	2003	4aiii	none	2		
2c	NEP	2003	4aiv	IIA81c	4		
2c	NEP	2003	4aiv	IIA81d	4		
2c	NEP	2003	4aiv	none	29		
2c	NEP	2003	4av	none	14		
2c	NEP	2003	4bi	none	7		
2c	NEP	2003	none	none	120		
2c	NEP	2004	4aii	IIA81c	655		
2c	NEP	2004	4aii	IIA81d	2668		
2c	NEP	2004	4aii	none	3925		
2c	NEP	2004	4aiii	IIA81d	2		
2c	NEP	2004	4aiii	none	4		
2c	NEP	2004	4aiv	IIA81c	6		
2c	NEP	2004	4aiv	IIA81d	4		
2c	NEP	2004	4aiv	none	29		
2c	NEP	2004	4av	none	1		
2c	NEP	2004	4bi	none	1		
2c	NEP	2004	none	none	572		
2c	NEP	2005	4aii	IIA81c	683		
2c	NEP	2005	4aii	IIA81d	2599		
2c	NEP	2005	4aii	none	3662		
2c	NEP	2005	4aiii	IIA81d	4		
2c	NEP	2005	4aiii	none	4		
2c	NEP	2005	4aiv	IIA81c	7		
2c	NEP	2005	4aiv	IIA81d	1		

Table 6.3.4.1 continued

REG_AREA	SPECIES	YEAR	REG_GEAR	SPECON	LANDINGS	DISCARDS	DISC RATE BY GEAR
2c	NEP	2005	4aiv	none	12		
2c	NEP	2005	4ci	none	9		
2c	NEP	2005	none	none	3		
2c	NEP	2006	4ai	none	1		
2c	NEP	2006	4aii	IIA81c	743		
2c	NEP	2006	4aii	IIA81d	2994		
2c	NEP	2006	4aii	none	4053		
2c	NEP	2006	4aiii	IIA81d	1		
2c	NEP	2006	4aiii	none	5		
2c	NEP	2006	4aiv	IIA81c	3		
2c	NEP	2006	4aiv	IIA81d	5		
2c	NEP	2006	4aiv	none	17		
2c	NEP	2006	4av	IIA81c	1		
2c	NEP	2006	4bi	none	3		
2c	NEP	2006	none	none	2		
2c	NEP	2007	4aii	IIA81c	635		
2c	NEP	2007	4aii	IIA81d	3515		
2c	NEP	2007	4aii	none	5207		
2c	NEP	2007	4aiii	IIA81d	1		
2c	NEP	2007	4aiii	none	38		
2c	NEP	2007	4aiv	IIA81c	2		
2c	NEP	2007	4aiv	IIA81d	8		
2c	NEP	2007	4aiv	none	12		
2c	NEP	2007	4bi	none	1		
2c	NEP	2007	none	none	2		
2c	PLE	2003	4aii	IIA81c	59	22	0.27
2c	PLE	2003	4aii	IIA81d	23	7	0.24
2c	PLE	2003	4aii	none	171	54	0.24
2c	PLE	2003	4aiv	IIA81c	33	4	0.1
2c	PLE	2003	4aiv	IIA81d	29	1	0.04
2c	PLE	2003	4aiv	IIA81k	4		0.03
2c	PLE	2003	4aiv	none	277	42	0.13
2c	PLE	2003	4av	IIA81c	1		
2c	PLE	2003	4av	IIA81d	8		
2c	PLE	2003	4av	none	29		
2c	PLE	2003	4bi	none	742		
2c	PLE	2003	4bii	none	6		
2c	PLE	2003	4biii	none	32		
2c	PLE	2003	none	none	23		
2c	PLE	2004	4aii	IIA81c	76		
2c	PLE	2004	4aii	IIA81d	27		
2c	PLE	2004	4aii	none	217	1	0.01
2c	PLE	2004	4aiii	IIA81d	5		
2c	PLE	2004	4aiii	none	35		
2c	PLE	2004	4aiv	IIA81c	24		
2c	PLE	2004	4aiv	IIA81d	27		
2c	PLE	2004	4aiv	IIA81k	6		
2c	PLE	2004	4aiv	none	65		
2c	PLE	2004	4av	IIA81d	2		
2c	PLE	2004	4av	none	1		
2c	PLE	2004	4bi	none	516	242	0.32
2c	PLE	2004	4bii	none	2		
2c	PLE	2004	4biii	none	1		
2c	PLE	2004	none	none	91		
2c	PLE	2005	4aii	IIA81c	73		
2c	PLE	2005	4aii	IIA81d	44		
2c	PLE	2005	4aii	none	232		
2c	PLE	2005	4aiii	IIA81d	9		
2c	PLE	2005	4aiii	none	28		
2c	PLE	2005	4aiv	IIA81c	17		
2c	PLE	2005	4aiv	IIA81d	22		
2c	PLE	2005	4aiv	none	36		
2c	PLE	2005	4av	IIA81c	1		
2c	PLE	2005	4bi	none	660	213	0.24
2c	PLE	2005	4bii	none	3		
2c	PLE	2005	4ci	none	2		
2c	PLE	2005	none	none	49		
2c	PLE	2006	4aii	IIA81c	72		
2c	PLE	2006	4aii	IIA81d	36		

Table 6.3.4.1 continued

REG_AREA	SPECIES	YEAR	REG_GEAR	SPECON	LANDINGS	DISCARDS	DISC RATE BY GEAR
2c	PLE	2006	4aii	none	194		
2c	PLE	2006	4aiii	IIA81d	6		
2c	PLE	2006	4aiii	none	11		
2c	PLE	2006	4aiv	IIA81c	57		
2c	PLE	2006	4aiv	IIA81d	21		
2c	PLE	2006	4aiv	none	29		
2c	PLE	2006	4av	IIA81c	5		
2c	PLE	2006	4bi	none	401	166	0.29
2c	PLE	2006	none	none	30		
2c	PLE	2007	4aii	IIA81c	78		0.01
2c	PLE	2007	4aii	IIA81d	62		
2c	PLE	2007	4aii	none	202	1	
2c	PLE	2007	4aiii	none	12		
2c	PLE	2007	4aiv	IIA81c	16		
2c	PLE	2007	4aiv	IIA81d	4		
2c	PLE	2007	4aiv	none	35		
2c	PLE	2007	4av	IIA81d	1		
2c	PLE	2007	4bi	none	252	105	0.29
2c	PLE	2007	4bii	none	2		
2c	PLE	2007	none	none	45		
2c	POK	2003	4aii	IIA81c	5		
2c	POK	2003	4aii	IIA81d	13	13	0.5
2c	POK	2003	4aii	none	25		
2c	POK	2003	4aiv	IIA81c	10		
2c	POK	2003	4aiv	IIA81d	84	40	0.32
2c	POK	2003	4aiv	none	115	217	0.65
2c	POK	2003	4av	IIA81d	8	36	0.82
2c	POK	2003	4ci	none	1		
2c	POK	2003	4cii	none	3		
2c	POK	2003	4ciii	none	5		
2c	POK	2003	none	none	4		
2c	POK	2004	4aii	IIA81c	4		
2c	POK	2004	4aii	IIA81d	5		
2c	POK	2004	4aii	none	12		
2c	POK	2004	4aiv	IIA81c	11		
2c	POK	2004	4aiv	IIA81d	95	27	0.22
2c	POK	2004	4aiv	none	67		
2c	POK	2004	4cii	none	3		
2c	POK	2004	4ciii	none	2		
2c	POK	2004	none	none	16		
2c	POK	2005	4aii	IIA81c	1		
2c	POK	2005	4aii	IIA81d	3		
2c	POK	2005	4aii	none	13	12	0.49
2c	POK	2005	4aiv	IIA81c	2		
2c	POK	2005	4aiv	IIA81d	34		
2c	POK	2005	4aiv	none	28		
2c	POK	2005	4bi	none	2		
2c	POK	2005	4ci	none	2		
2c	POK	2005	4cii	none	1		
2c	POK	2006	4aii	none	2		
2c	POK	2006	4aiv	IIA81d	14		
2c	POK	2006	4aiv	none	6		
2c	POK	2006	4ciii	none	3		
2c	POK	2007	4aii	none	1		
2c	POK	2007	4aiv	IIA81d	1		
2c	POK	2007	4aiv	none	2		
2c	POK	2007	4cii	none	2		
2c	POK	2007	4ciii	none	8		
2c	SOL	2003	4aii	IIA81c	6		
2c	SOL	2003	4aii	IIA81d	3		
2c	SOL	2003	4aii	none	26		
2c	SOL	2003	4aiv	IIA81c	1		
2c	SOL	2003	4aiv	IIA81d	1		
2c	SOL	2003	4aiv	none	12		
2c	SOL	2003	4av	none	2		
2c	SOL	2003	4bi	none	728		
2c	SOL	2003	4bii	none	2		
2c	SOL	2003	4biii	none	22		
2c	SOL	2003	none	none	12		

Table 6.3.4.1 continued

REG_AREA	SPECIES	YEAR	REG_GEAR	SPECON	LANDINGS	DISCARDS	DISC RATE BY GEAR
2c	SOL	2004	4aii	IIA81c	4		
2c	SOL	2004	4aii	IIA81d	4		
2c	SOL	2004	4aii	none	18		
2c	SOL	2004	4aiii	none	1		
2c	SOL	2004	4aiv	IIA81c	1		
2c	SOL	2004	4aiv	IIA81d	1		
2c	SOL	2004	4aiv	IIA81k	1		
2c	SOL	2004	4aiv	none	4		
2c	SOL	2004	4bi	none	570	7	0.01
2c	SOL	2004	4biii	none	1		
2c	SOL	2004	none	none	25		
2c	SOL	2005	4aii	IIA81c	6		
2c	SOL	2005	4aii	IIA81d	5		
2c	SOL	2005	4aii	none	20		
2c	SOL	2005	4aiii	none	1		
2c	SOL	2005	4aiv	none	6		
2c	SOL	2005	4bi	none	725	37	0.05
2c	SOL	2005	4bii	none	1		
2c	SOL	2005	4biii	none	1		
2c	SOL	2005	none	none	18		
2c	SOL	2006	4aii	IIA81c	7		
2c	SOL	2006	4aii	IIA81d	5		
2c	SOL	2006	4aii	none	20		
2c	SOL	2006	4aiv	none	2		
2c	SOL	2006	4bi	none	479	22	0.04
2c	SOL	2006	none	none	26		
2c	SOL	2007	4aii	IIA81c	6		
2c	SOL	2007	4aii	IIA81d	7		
2c	SOL	2007	4aii	none	39		
2c	SOL	2007	4aiv	none	3		
2c	SOL	2007	4bi	none	365	13	0.04
2c	SOL	2007	4bii	none	1		
2c	SOL	2007	none	none	57		
2c	WHG	2003	4aii	IIA81c	7		
2c	WHG	2003	4aii	IIA81d	11	104	0.9
2c	WHG	2003	4aii	none	164		
2c	WHG	2003	4aiii	none	1	6	0.91
2c	WHG	2003	4aiv	IIA81c	5		
2c	WHG	2003	4aiv	IIA81d	58	99	0.63
2c	WHG	2003	4aiv	none	151	35	0.19
2c	WHG	2003	4av	none	1		
2c	WHG	2003	4bi	none	16		
2c	WHG	2003	4cii	none	1		
2c	WHG	2003	4ciii	none	2		
2c	WHG	2003	none	none	9		
2c	WHG	2004	4aii	IIA81c	6		
2c	WHG	2004	4aii	IIA81d	10	21	0.68
2c	WHG	2004	4aii	none	63	401	0.86
2c	WHG	2004	4aiii	none	1	7	0.86
2c	WHG	2004	4aiv	IIA81c	6		
2c	WHG	2004	4aiv	IIA81d	16	77	0.83
2c	WHG	2004	4aiv	IIA81k	1		
2c	WHG	2004	4aiv	none	38	69	0.64
2c	WHG	2004	4bi	none	12	11	0.47
2c	WHG	2004	4biii	none	1		
2c	WHG	2004	4cii	none	2		
2c	WHG	2004	4ciii	none	1		
2c	WHG	2004	none	none	34		
2c	WHG	2005	4aii	IIA81c	5		
2c	WHG	2005	4aii	IIA81d	7		
2c	WHG	2005	4aii	none	90	138	0.6
2c	WHG	2005	4aiii	none	1		
2c	WHG	2005	4aiv	IIA81c	1		
2c	WHG	2005	4aiv	IIA81d	6		
2c	WHG	2005	4aiv	none	29		
2c	WHG	2005	4bi	none	11	10	0.47
2c	WHG	2005	4ci	none	1		
2c	WHG	2006	4aii	IIA81d	2		
2c	WHG	2006	4aii	none	59		

Table 6.3.4.1 continued

REG_AREA	SPECIES	YEAR	REG_GEAR	SPECON	LANDINGS	DISCARDS	DISC RATE BY GEAR
2c	WHG	2006	4aiii	none	1		
2c	WHG	2006	4aiv	IIA81d	2		
2c	WHG	2006	4aiv	none	16		
2c	WHG	2006	4bi	none	4	4	0.46
2c	WHG	2007	4aii	IIA81d	1		0.01
2c	WHG	2007	4aii	none	96		
2c	WHG	2007	4aiii	none	1		
2c	WHG	2007	4aiv	IIA81d	1		
2c	WHG	2007	4aiv	none	89		
2c	WHG	2007	4bi	none	4	4	0.47
2c	WHG	2007	4ciii	none	1		

In accordance with the ToR, the following Table 6.3.4.2 lists the landings and discards at age by derogation of cod, plaice and sole. The values are illustrated in Figures 6.3.4.3-5. Additional species specific data queries could be provided on request depending on data provisions by the experts or national institutes

Table 6.3.4.2 Irish Sea. Cod (COD), plaice (PLE) and sole (SOL) landings (L) and discards (D) at ages 1-9 ('000) by derogation, 2003-2007.

SPECIES	REG_AREA	REG_GEAR	SPECON	AGE	2003 L	2003 D	2004 L	2004 D	2005 L	2005 D	2006 L	2006 D	2007 L	2007 D
COD	2c	4aii	IIA81c	1										
COD	2c	4aii	IIA81c	2	8		3							
COD	2c	4aii	IIA81c	3			2							
COD	2c	4aii	IIA81c	4										
COD	2c	4aii	IIA81c	5										
COD	2c	4aii	IIA81c	6										
COD	2c	4aii	IIA81c	7										
COD	2c	4aii	IIA81c	8										
COD	2c	4aii	IIA81c	9										
COD	2c	4aii	IIA81d	1	3	10	9	217	5	227	2	275	10	240
COD	2c	4aii	IIA81d	2	48	9	30	1	42	24	14	7	20	158
COD	2c	4aii	IIA81d	3	6		12		7		8	3	3	
COD	2c	4aii	IIA81d	4	3				4		2		1	
COD	2c	4aii	IIA81d	5			6				2			
COD	2c	4aii	IIA81d	6										
COD	2c	4aii	IIA81d	7										
COD	2c	4aii	IIA81d	8										
COD	2c	4aii	IIA81d	9										
COD	2c	4aii	none	1	6	7	20	469		175				
COD	2c	4aii	none	2	154	2	71	3	39	35				
COD	2c	4aii	none	3	14		30		10					
COD	2c	4aii	none	4	9		1		5					
COD	2c	4aii	none	5			15							
COD	2c	4aii	none	6										
COD	2c	4aii	none	7										
COD	2c	4aii	none	8										
COD	2c	4aii	none	9										
COD	2c	4aiii	none	1										10
COD	2c	4aiii	none	2			1						1	6
COD	2c	4aiii	none	3										
COD	2c	4aiii	none	4										
COD	2c	4aiii	none	5										
COD	2c	4aiii	none	6										
COD	2c	4aiii	none	7										
COD	2c	4aiii	none	8										
COD	2c	4aiii	none	9										
COD	2c	4aiv	IIA81c	1										
COD	2c	4aiv	IIA81c	2	3		1							
COD	2c	4aiv	IIA81c	3	2									
COD	2c	4aiv	IIA81c	4	1									
COD	2c	4aiv	IIA81c	5										
COD	2c	4aiv	IIA81c	6										
COD	2c	4aiv	IIA81c	7										
COD	2c	4aiv	IIA81c	8										
COD	2c	4aiv	IIA81c	9										
COD	2c	4aiv	IIA81d	1	11	7	13	150		8		14		
COD	2c	4aiv	IIA81d	2	55	4	65		29	4	8	2	12	
COD	2c	4aiv	IIA81d	3	6	2	17		7		5			
COD	2c	4aiv	IIA81d	4	4		1		5					
COD	2c	4aiv	IIA81d	5			1		2		2			
COD	2c	4aiv	IIA81d	6										
COD	2c	4aiv	IIA81d	7										
COD	2c	4aiv	IIA81d	8										
COD	2c	4aiv	IIA81d	9										
COD	2c	4aiv	IIA81k	1										
COD	2c	4aiv	IIA81k	2										
COD	2c	4aiv	IIA81k	3										
COD	2c	4aiv	IIA81k	4										
COD	2c	4aiv	IIA81k	5										
COD	2c	4aiv	IIA81k	6										
COD	2c	4aiv	IIA81k	7										
COD	2c	4aiv	IIA81k	8										
COD	2c	4aiv	IIA81k	9										
COD	2c	4aiv	none	1	1		10							
COD	2c	4aiv	none	2	89		78						46	
COD	2c	4aiv	none	3	36		19						1	

Table 6.3.4.2 continued

SPECIES	REG_AREA	REG_GEAR	SPECON	AGE	2003 L	2003 D	2004 L	2004 D	2005 L	2005 D	2006 L	2006 D	2007 L	2007 D
COD	2c	4aiv	none	4	25		1							
COD	2c	4aiv	none	5	3									
COD	2c	4aiv	none	6										
COD	2c	4aiv	none	7	1									
COD	2c	4aiv	none	8										
COD	2c	4aiv	none	9										
COD	2c	4bi	none	1					12		8			
COD	2c	4bi	none	2					5		40		18	
COD	2c	4bi	none	3							6		5	
COD	2c	4bi	none	4										
COD	2c	4bi	none	5										
COD	2c	4bi	none	6										
COD	2c	4bi	none	7										
COD	2c	4bi	none	8										
COD	2c	4bi	none	9										
PLE	2c	4aii	IIA81c	1			2							
PLE	2c	4aii	IIA81c	2			21				48		4	
PLE	2c	4aii	IIA81c	3	46	263	62		3		67		42	1
PLE	2c	4aii	IIA81c	4	42		67		15		10		111	
PLE	2c	4aii	IIA81c	5	11		39		14		19		76	
PLE	2c	4aii	IIA81c	6	1		19		5				67	
PLE	2c	4aii	IIA81c	7	3		10		2				25	
PLE	2c	4aii	IIA81c	8	1		6				19		20	
PLE	2c	4aii	IIA81c	9			1		1				3	
PLE	2c	4aii	IIA81d	1			1							
PLE	2c	4aii	IIA81d	2			11				25		4	
PLE	2c	4aii	IIA81d	3	15	90	26		5		35		38	1
PLE	2c	4aii	IIA81d	4	14		26		26		5		91	
PLE	2c	4aii	IIA81d	5	4		16		24		10		56	
PLE	2c	4aii	IIA81d	6			8		9				52	
PLE	2c	4aii	IIA81d	7	1		4		3				20	
PLE	2c	4aii	IIA81d	8			2				10		14	
PLE	2c	4aii	IIA81d	9			1		1				2	
PLE	2c	4aii	none	1			12							
PLE	2c	4aii	none	2			86				91		10	
PLE	2c	4aii	none	3	115	650	211		23		128		108	2
PLE	2c	4aii	none	4	104		204	1	114		18		300	
PLE	2c	4aii	none	5	28		125	1	109		37		187	1
PLE	2c	4aii	none	6	1		61	1	41				173	
PLE	2c	4aii	none	7	8		31		14				70	
PLE	2c	4aii	none	8	1		19				37		46	
PLE	2c	4aii	none	9			6		4				7	
PLE	2c	4aiii	IIA81d	1										
PLE	2c	4aiii	IIA81d	2										
PLE	2c	4aiii	IIA81d	3			1							
PLE	2c	4aiii	IIA81d	4			1							
PLE	2c	4aiii	IIA81d	5										
PLE	2c	4aiii	IIA81d	6										
PLE	2c	4aiii	IIA81d	7										
PLE	2c	4aiii	IIA81d	8										
PLE	2c	4aiii	IIA81d	9										
PLE	2c	4aiii	none	1										
PLE	2c	4aiii	none	2			2							
PLE	2c	4aiii	none	3			4							
PLE	2c	4aiii	none	4			3							
PLE	2c	4aiii	none	5			2							
PLE	2c	4aiii	none	6			1							
PLE	2c	4aiii	none	7										
PLE	2c	4aiii	none	8										
PLE	2c	4aiii	none	9										
PLE	2c	4aiv	IIA81c	1										
PLE	2c	4aiv	IIA81c	2			4				13			
PLE	2c	4aiv	IIA81c	3	29	10	14		1		32		2	
PLE	2c	4aiv	IIA81c	4	34	4	15		4		7		9	
PLE	2c	4aiv	IIA81c	5	7		11		3		9		8	
PLE	2c	4aiv	IIA81c	6	4	2	6		1		2		6	
PLE	2c	4aiv	IIA81c	7	6	4	4		1		2		3	
PLE	2c	4aiv	IIA81c	8	1		2				5		2	
PLE	2c	4aiv	IIA81c	9	1	1	1							
PLE	2c	4aiv	IIA81d	1										
PLE	2c	4aiv	IIA81d	2			4				10			
PLE	2c	4aiv	IIA81d	3	21	3	15				25		2	
PLE	2c	4aiv	IIA81d	4	24	2	19				5		4	
PLE	2c	4aiv	IIA81d	5	5		12				7		2	
PLE	2c	4aiv	IIA81d	6	3	1	7				2		2	
PLE	2c	4aiv	IIA81d	7	4	1	3				1		1	
PLE	2c	4aiv	IIA81d	8			2				4		1	
PLE	2c	4aiv	IIA81d	9	1									
PLE	2c	4aiv	IIA81k	1										
PLE	2c	4aiv	IIA81k	2										
PLE	2c	4aiv	IIA81k	3	6									
PLE	2c	4aiv	IIA81k	4	6									
PLE	2c	4aiv	IIA81k	5	1									
PLE	2c	4aiv	IIA81k	6										
PLE	2c	4aiv	IIA81k	7	1									
PLE	2c	4aiv	IIA81k	8										
PLE	2c	4aiv	IIA81k	9										
PLE	2c	4aiv	none	1										
PLE	2c	4aiv	none	2			4		1		7			
PLE	2c	4aiv	none	3	314	105	19		2		19		1	
PLE	2c	4aiv	none	4	338	84	25		8		4		4	
PLE	2c	4aiv	none	5	78		17		7		5		3	
PLE	2c	4aiv	none	6	23	15	10		3		1		3	
PLE	2c	4aiv	none	7	48	45	6		2		1		1	
PLE	2c	4aiv	none	8	4		3		1		3		1	
PLE	2c	4aiv	none	9	8	7	1							
PLE	2c	4av	IIA81c	1										
PLE	2c	4av	IIA81c	2										
PLE	2c	4av	IIA81c	3										

Table 6.3.4.2 continued

SPECIES	REG_AREA	REG_GEAR	SPECON	AGE	2003 L	2003 D	2004 L	2004 D	2005 L	2005 D	2006 L	2006 D	2007 L	2007 D
PLE	2c	4av	IIA81c	4										
PLE	2c	4av	IIA81c	5										
PLE	2c	4av	IIA81c	6										
PLE	2c	4av	IIA81c	7										
PLE	2c	4av	IIA81c	8										
PLE	2c	4av	IIA81c	9										
PLE	2c	4bi	none	1										
PLE	2c	4bi	none	2					111					
PLE	2c	4bi	none	3					479					
PLE	2c	4bi	none	4					690					
PLE	2c	4bi	none	5					367					
PLE	2c	4bi	none	6					139					
PLE	2c	4bi	none	7					57					
PLE	2c	4bi	none	8					19					
PLE	2c	4bi	none	9					5					
SOL	2c	4aii	IIA81c	1										
SOL	2c	4aii	IIA81c	2									1	
SOL	2c	4aii	IIA81c	3									3	
SOL	2c	4aii	IIA81c	4									5	
SOL	2c	4aii	IIA81c	5									5	
SOL	2c	4aii	IIA81c	6									1	
SOL	2c	4aii	IIA81c	7									1	
SOL	2c	4aii	IIA81c	8									2	
SOL	2c	4aii	IIA81c	9									2	
SOL	2c	4aii	IIA81d	1										
SOL	2c	4aii	IIA81d	2									1	
SOL	2c	4aii	IIA81d	3									3	
SOL	2c	4aii	IIA81d	4									5	
SOL	2c	4aii	IIA81d	5									5	
SOL	2c	4aii	IIA81d	6									1	
SOL	2c	4aii	IIA81d	7									1	
SOL	2c	4aii	IIA81d	8									2	
SOL	2c	4aii	IIA81d	9									2	
SOL	2c	4aii	none	1										
SOL	2c	4aii	none	2									5	
SOL	2c	4aii	none	3									14	
SOL	2c	4aii	none	4									20	
SOL	2c	4aii	none	5									19	
SOL	2c	4aii	none	6									5	
SOL	2c	4aii	none	7									5	
SOL	2c	4aii	none	8									6	
SOL	2c	4aii	none	9									6	
SOL	2c	4aiv	IIA81d	1										
SOL	2c	4aiv	IIA81d	2										
SOL	2c	4aiv	IIA81d	3										
SOL	2c	4aiv	IIA81d	4										
SOL	2c	4aiv	IIA81d	5										
SOL	2c	4aiv	IIA81d	6										
SOL	2c	4aiv	IIA81d	7										
SOL	2c	4aiv	IIA81d	8										
SOL	2c	4aiv	IIA81d	9										
SOL	2c	4aiv	none	1										
SOL	2c	4aiv	none	2										
SOL	2c	4aiv	none	3										
SOL	2c	4aiv	none	4			1							
SOL	2c	4aiv	none	5			2							
SOL	2c	4aiv	none	6			1							
SOL	2c	4aiv	none	7			1							
SOL	2c	4aiv	none	8										
SOL	2c	4aiv	none	9										
SOL	2c	4bi	none	1							15			
SOL	2c	4bi	none	2	289		284		600		107		124	
SOL	2c	4bi	none	3	959		910		1024		578		389	
SOL	2c	4bi	none	4	779		345		522		461		307	
SOL	2c	4bi	none	5	469		217		372		181		172	
SOL	2c	4bi	none	6	211		176		186		107		60	
SOL	2c	4bi	none	7	91		52		69		119		24	
SOL	2c	4bi	none	8	21		13		82		71		27	
SOL	2c	4bi	none	9	8		12		11		55		18	

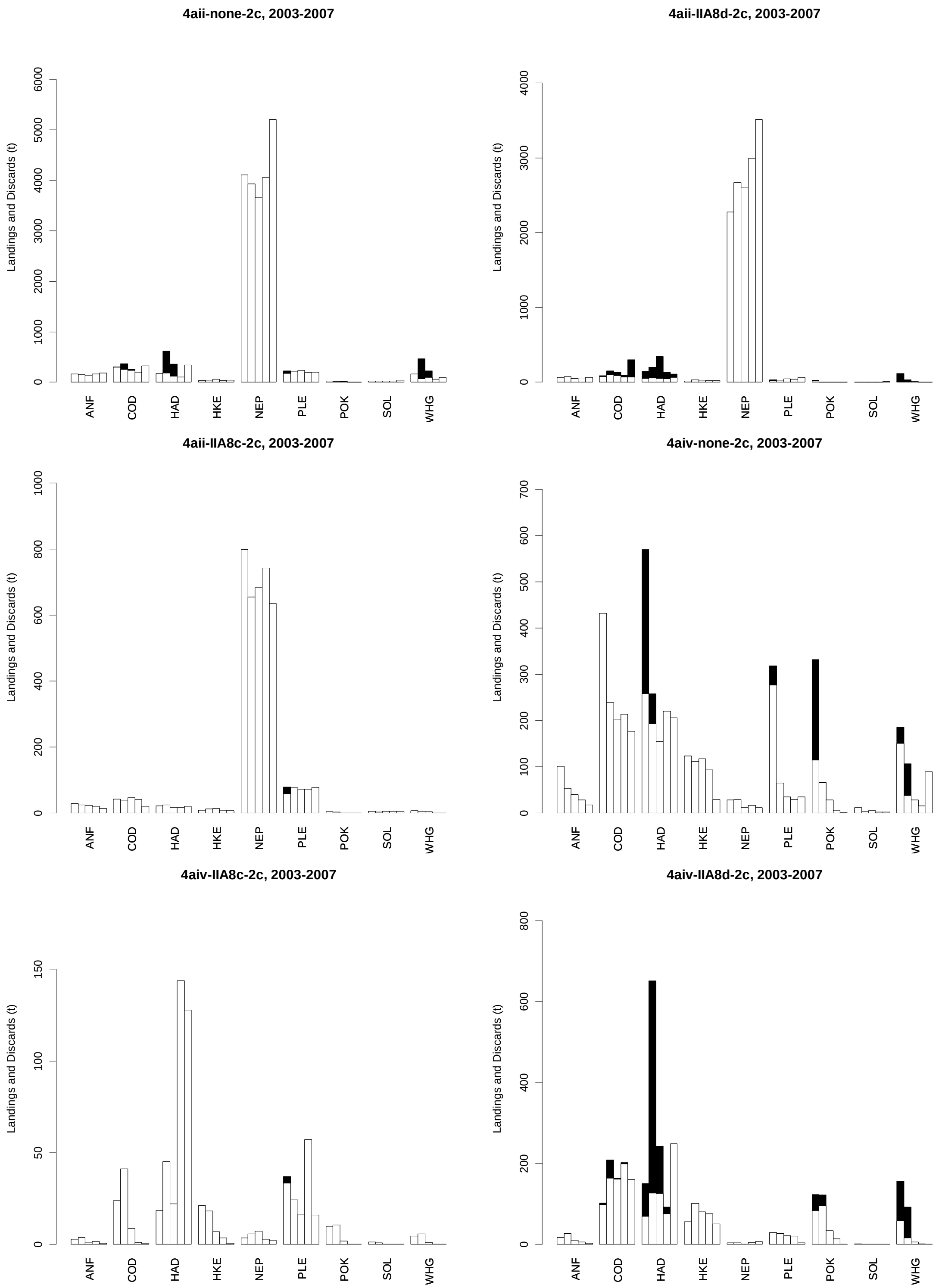


Figure 6.3.4.1 Irish Sea. Landings (t) and discard (t) by derogation and species, 2003-2007 (from left to right). Note that discard data are only available for some species and gears, so the lack of discard information for a given species/gear in the graphs means rather no information than zero discards.

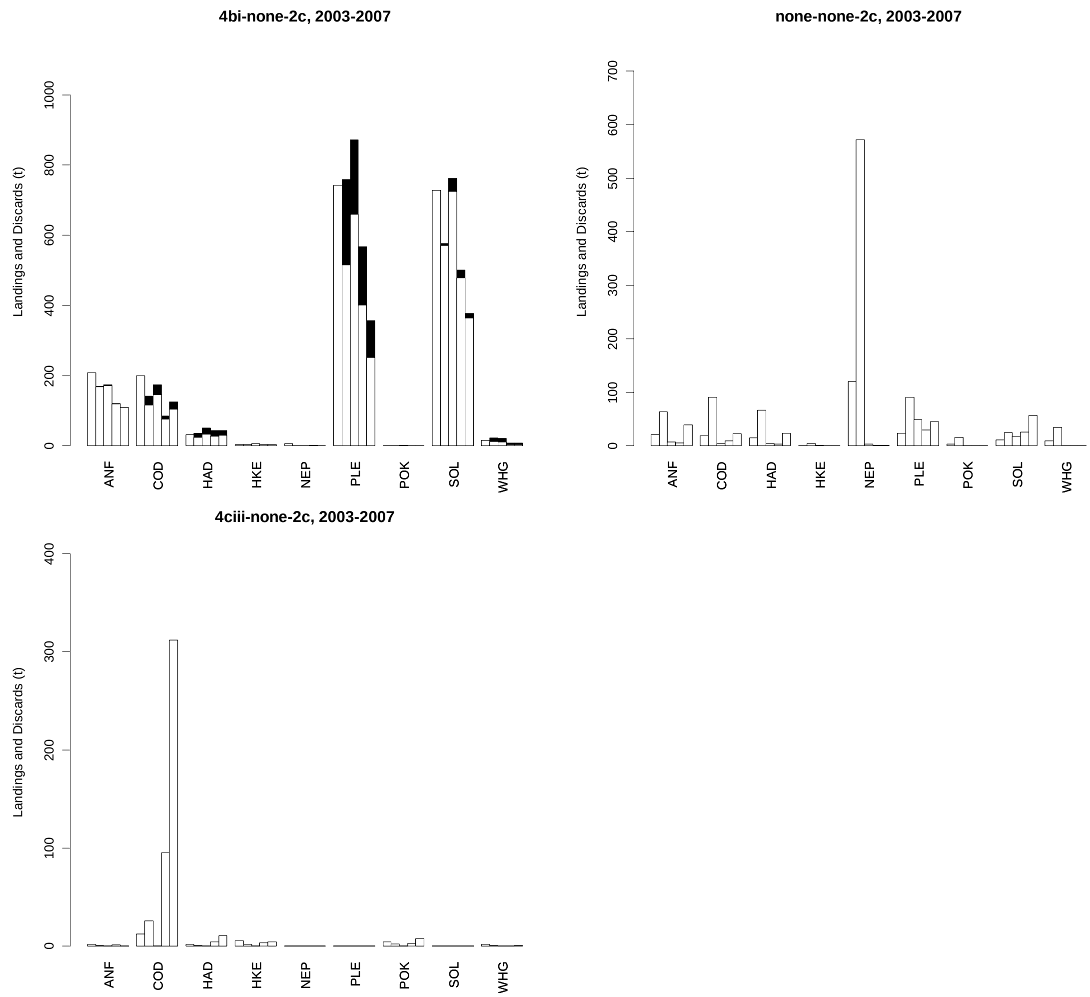


Figure 6.3.4.1 Continued. Note that discard data are only available for some species and gears, so the lack of discard information for a given species/gear in the graphs means rather no information than zero discards.

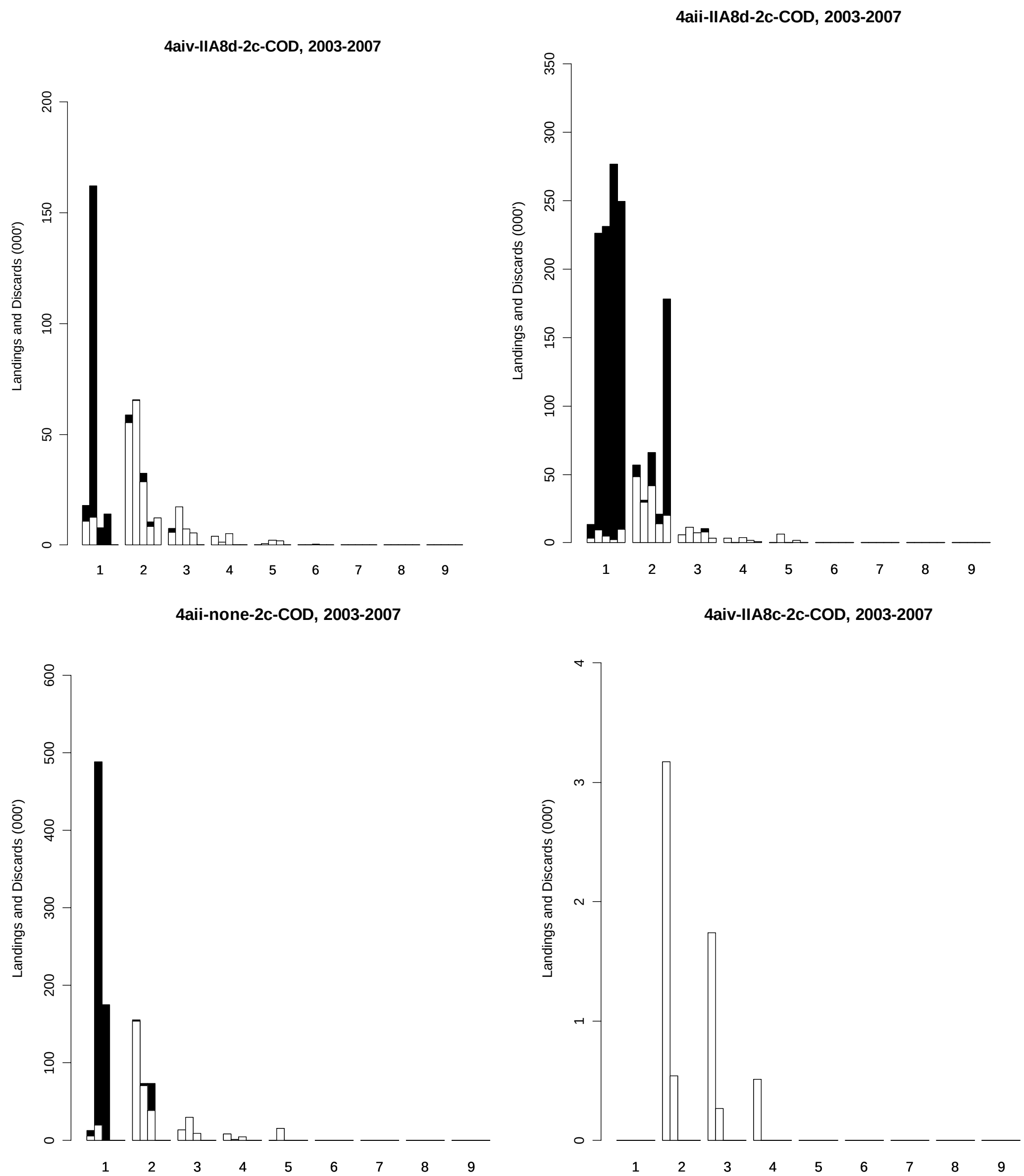


Figure 6.3.4.2 Irish Sea. Cod landings and discards (‘000) at ages 1-9 by major derogations, 2003-2007 (from left to right). Note that discard data are only available for some species and gears, so the lack of discard information for a given species/gear in the graphs means rather no information than zero discards.

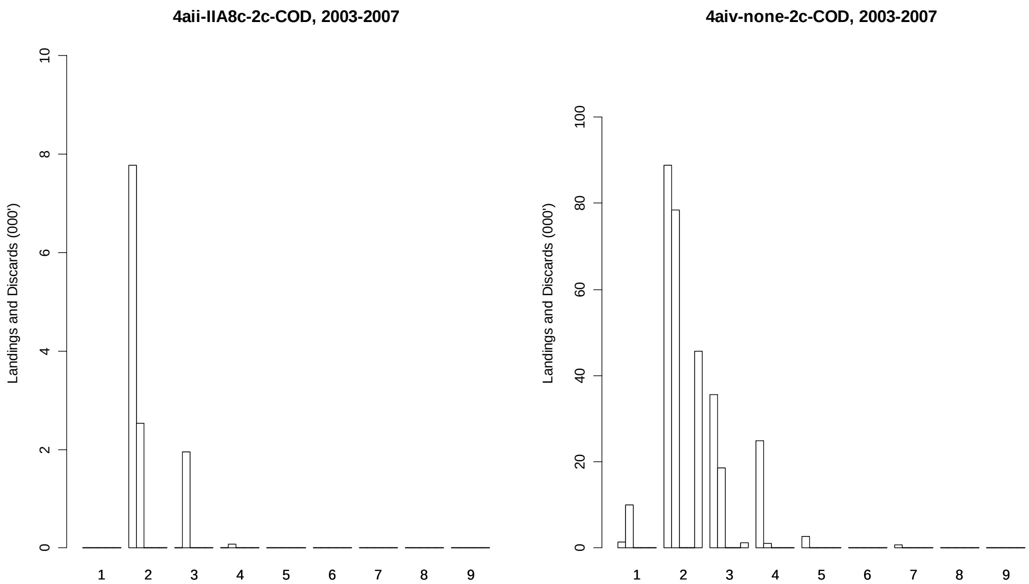


Figure 6.3.4.2 continued.

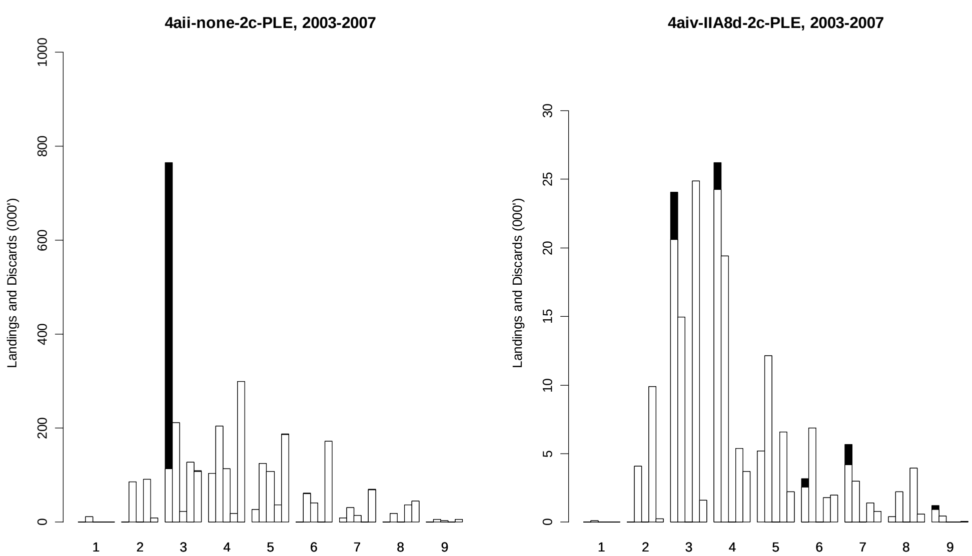


Figure 6.3.4.3 Irish Sea. Plaice landings and discards (‘000) at ages 1-9 by major derogations, 2003-2007 (from left to right). Note that discard data are only available for some species and gears, so the lack of discard information for a given species/gear in the graphs means rather no information than zero discards.

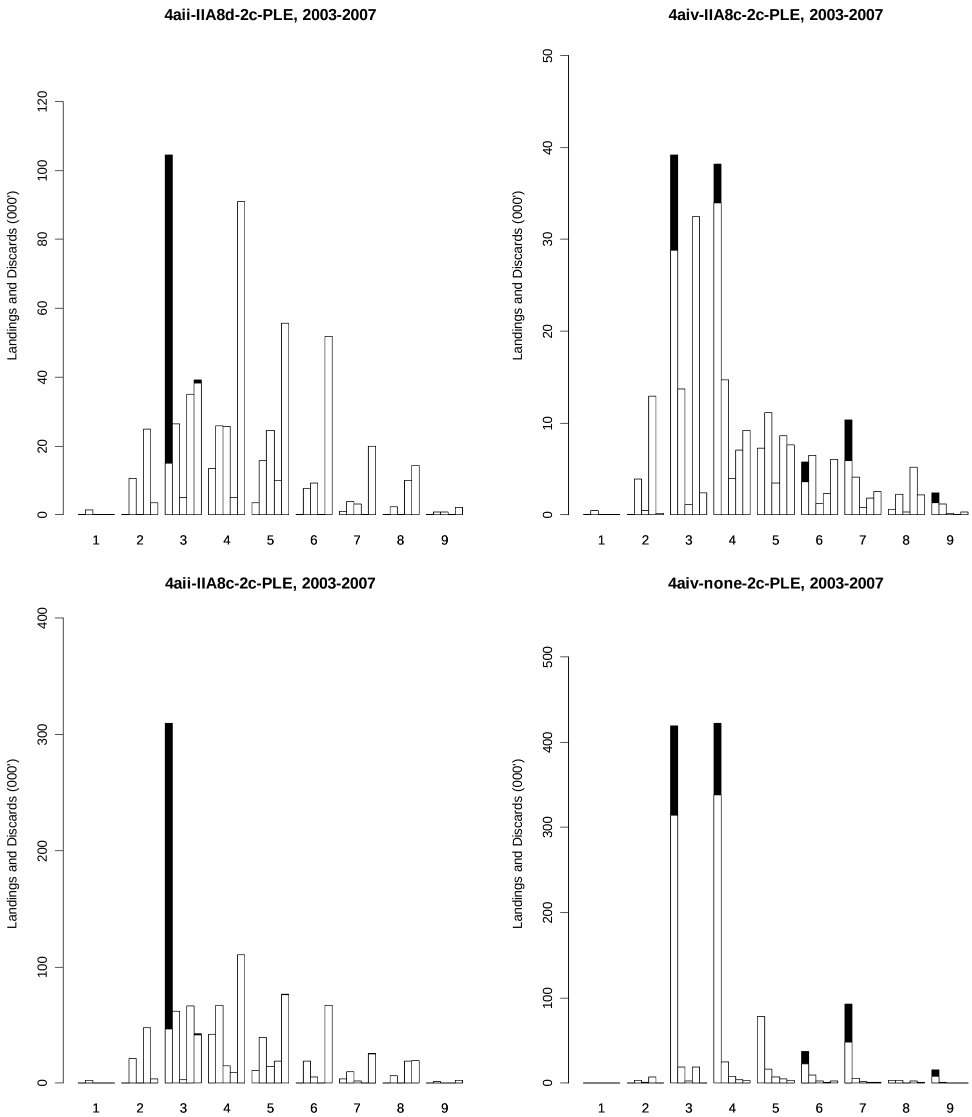


Figure 6.3.4.3 continued.

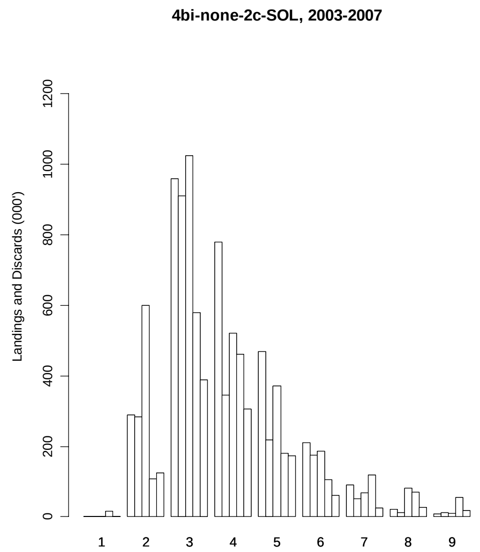


Figure 6.3.4.4 Irish Sea. Sole landings and discards ('000) at ages 1-9 by major derogations, 2003-2007 (from left to right). Note that discard data are only available for some species and gears, so the lack of discard information for a given species/gear in the graphs means rather no information than zero discards.

6.3.5. Trend in catch estimates in weight and numbers at age by derogation in management area 2d: West of Scotland

The following Table 6.3.5.1 lists the landings and discards for the main species by derogation. For the reason of space limitation of this report, the following sections represent the landings and discards by derogation in weight and numbers not for all species caught but only for anglerfish (ANF), cod (COD), haddock (HAD), hake, (HKE), *Nephrops* (NEP), plaice (PLE), saithe (POK), sole (SOL), and whiting (WHG). However, additional data queries for other species can be provided depending on data provisions of the national catches by the experts or national institutes. The data given in Table 6.3.5.1 forms the basis of Figures 6.3.5.1 and 6.3.5.2 displaying the relative catch compositions by derogations for the years 2003-2007. Discard information on anglerfish, hake, *Nephrops*, plaice and sole was not available for this report. The lack of the dark bars representing discards in these figures for those species indicates a lack of observations.

A description of the catch compositions of the derogations relevant to the area follows:-

4.a.ii (no special condition & IIA81d): The main species caught by this gear category is *Nephrops*. The other significant components of the catch are whiting and haddock. The high rates of discarding of whiting and haddock illustrated in Figure 6.3.5.1 suggest that vessels using this size of mesh belong to a targeted *Nephrops* fishery. Landings of whiting and haddock are higher for vessels not qualifying for special condition while the difference in discards is greater still. With respect to 4.a.ii none landings of anglerfish are now at a comparable level to landings of haddock. Catch of whiting are also reported as falling to a very low level in 2007. Investigation of national data submissions show reported landings for this category to be greatly reduced and also the discard rate.

4.a.iii (no special condition): The species composition in the catch from this gear category is very similar to that from the 4.a.ii category, including the high rates of discarding of haddock and whiting. Vessels using this type of net can also be considered to belong to a targeted *Nephrops* fishery.

4.a.iv (no special condition & IIA81d): Vessels not qualifying for any special condition catch a range of species, principle among them being anglerfish, haddock and saithe. Discards of haddock and whiting are comparable to landings. Vessels qualifying for special condition IIA81d predominantly catch saithe although catches of anglerfish are also important. Anglerfish landings assigned to 4.a.iv-IIA81d are now the highest assigned to any derogation. Cod catches have been comparable between these two categories up to 2006 but discards in the 4 aiv none category are shown to have increased markedly in 2007.

4.a.v: The main species caught are in descending order haddock, saithe, anglerfish and cod. Landings of anglerfish and saithe have steadily increased over the four years represented. Catches of whiting have declined significantly to the point where they are not significant. Landings of cod have remained relatively stable over the last four years but a significant proportion of the catch was recorded as discards for the first time in 2006 and in 2007 discards exceeded landings.

4.c.ii: Gillnets with mesh ≥110mm and <150mm are shown as having rapidly increasing landings of hake

4.e: The landings of long lines again shows rapidly increasing landings of hake. Landings of hake from this category are now greater than landings of all species combined of the 4.a.iii none category. Almost no fish of other species were landed.

It can be seen that landings of plaice and sole are negligible across all gear categories.

The ToR request landings and discards at age by derogation of cod, plaice and sole. Because of the very small landings of plaice and sole west of Scotland it is only relevant to present age specific data for cod for this region. The data is presented in Table 6.3.5.2 and the values are illustrated in Figure 6.3.5.3. Additional species specific data queries could be provided on request depending on data provisions by the experts or national institutes.

From Figure 6.3.5.3 it can be seen that landings in the 4.a.ii.and 4.a.iii gear groups are predominantly of fish at age two. For the larger mesh categories (4.a.iv and 4.a.v) landings are more evenly spread across ages two to four with some contribution also of fish at age five. Very few fish aged six and above are present in the catch. Across all categories discards of cod are primarily at age one and until 2005 almost exclusively at ages one and two. In 2006, however, discards at age 3 are noticeable in the 4.a.iv and 4.a.v gear categories and this has continued into 2007. In gear groups 4.a.ii and 4.a.iii discards easily exceed landings for fish at age one. For all gear categories represented there are (relative to other years and ages) high catches of age two fish in 2003 suggesting year class effects, although there does not appear a strong continuation of the effect in the catch of fish one year older the following year. Evidence of a strong 2005 year class is clear however. There is greatly increased catch of cod at age one in 2006 across gear categories and of cod age two in 2007. In all gear categories the majority of the catch of age two cod in 2007 was discarded. This is believed to be because restrictions in cod quotas prevent a greater proportion being landed.

The overall discard rate of cod (by weight) has increased in years subsequent to 2003 (Table 6.3.5.1). This was due initially to higher discard rates in the smaller meshed categories (4.a.ii and 4.a.iii). The rate of discarding reached 91% in the 4.a.ii category in 2006 and in this year significant discards were recorded in gear categories where discarding was low or negligible previously. In 2007, for categories where discard rates are available, discard rates were all at 65% or higher. The high discard rates in 2007 therefore apply to trawl gears of all mesh sizes from 70mm to 120+mm and for vessels classified as qualifying for special condition status because of a track record of low cod catch in 2002. As mentioned above it is believed the present high discard rates result from a combination of restrictive quotas and a strong 2005 year class of cod.

Table 6.3.5.1 West of Scotland. Landings (t), discards (t) and relative discard rates by species and derogation, 2003-2007.

REG_AREA	SPECIES	YEAR	REG_GEAR	SPECON	LANDINGS	DISCARDS	DISC RATE BY GEAR
2d	ANF	2003	4aii	IIA81c	1		
2d	ANF	2003	4aii	IIA81d	131		
2d	ANF	2003	4aii	none	206		
2d	ANF	2003	4aiii	IIA81d	22		
2d	ANF	2003	4aiii	none	58		
2d	ANF	2003	4aiv	IIA81c	6		
2d	ANF	2003	4aiv	IIA81d	546		
2d	ANF	2003	4aiv	none	838		
2d	ANF	2003	4av	IIA81d	41		
2d	ANF	2003	4av	none	311		
2d	ANF	2003	4biv	none	1		
2d	ANF	2003	4civ	none	87		
2d	ANF	2003	none	none	15		
2d	ANF	2004	4aii	IIA81c	1		
2d	ANF	2004	4aii	IIA81d	92		
2d	ANF	2004	4aii	none	165		
2d	ANF	2004	4aiii	IIA81d	45		
2d	ANF	2004	4aiii	none	36		
2d	ANF	2004	4aiv	IIA81c	7		
2d	ANF	2004	4aiv	IIA81d	696		
2d	ANF	2004	4aiv	none	735		
2d	ANF	2004	4av	IIA81d	41		
2d	ANF	2004	4av	none	392		
2d	ANF	2004	4biii	IIA81c	1		
2d	ANF	2004	4biv	none	14		
2d	ANF	2004	4civ	none	58		
2d	ANF	2004	none	none	15		
2d	ANF	2005	4aii	IIA81c	1		
2d	ANF	2005	4aii	IIA81d	43		
2d	ANF	2005	4aii	none	215		
2d	ANF	2005	4aiii	IIA81d	52		
2d	ANF	2005	4aiii	none	21		
2d	ANF	2005	4aiv	IIA81c	8		
2d	ANF	2005	4aiv	IIA81d	1016		
2d	ANF	2005	4aiv	none	718		
2d	ANF	2005	4av	IIA81d	141		
2d	ANF	2005	4av	none	508		
2d	ANF	2005	4biv	none	3		
2d	ANF	2005	4cii	none	1		
2d	ANF	2005	4civ	none	58		
2d	ANF	2005	none	none	1		
2d	ANF	2006	4aii	IIA81d	111		
2d	ANF	2006	4aii	none	166		
2d	ANF	2006	4aiii	IIA81d	83		
2d	ANF	2006	4aiii	none	64		
2d	ANF	2006	4aiv	IIA81c	21		
2d	ANF	2006	4aiv	IIA81d	901		
2d	ANF	2006	4aiv	none	615		
2d	ANF	2006	4av	IIA81d	223		
2d	ANF	2006	4av	none	453		
2d	ANF	2006	4biv	none	12		
2d	ANF	2006	4cii	none	2		
2d	ANF	2006	4civ	none	45		
2d	ANF	2006	none	none	2		
2d	ANF	2007	4aii	IIA81d	58		
2d	ANF	2007	4aii	none	173		
2d	ANF	2007	4aiii	IIA81d	96		
2d	ANF	2007	4aiii	none	125		
2d	ANF	2007	4aiv	IIA81c	21		
2d	ANF	2007	4aiv	IIA81d	1359		
2d	ANF	2007	4aiv	none	783		
2d	ANF	2007	4av	IIA81c	2		
2d	ANF	2007	4av	IIA81d	159		
2d	ANF	2007	4av	none	538		
2d	ANF	2007	4cii	none	2		
2d	ANF	2007	4civ	none	52		
2d	ANF	2007	none	none	1		

Table 6.3.5.1 (continued) West of Scotland. Landings (t), discards (t) and relative discard rates by species and derogation, 2003-2007.

REG_AREA	SPECIES	YEAR	REG_GEAR	SPECON	LANDINGS	DISCARDS	DISC RATE BY GEAR
2d	COD	2003	4aii	IIA81c	2		
2d	COD	2003	4aii	IIA81d	99	11	0.1
2d	COD	2003	4aii	none	108	16	0.13
2d	COD	2003	4aiii	IIA81d	16	2	0.09
2d	COD	2003	4aiii	none	20	2	0.09
2d	COD	2003	4aiv	IIA81c	4		
2d	COD	2003	4aiv	IIA81d	96	1	0.01
2d	COD	2003	4aiv	none	255		
2d	COD	2003	4av	IIA81d	19		
2d	COD	2003	4av	none	611	4	0.01
2d	COD	2003	4biv	none	2		
2d	COD	2003	4cii	none	6		
2d	COD	2003	4e	none	4		
2d	COD	2003	none	none	2		0.05
2d	COD	2004	4aii	IIA81c	1		
2d	COD	2004	4aii	IIA81d	32	21	0.39
2d	COD	2004	4aii	none	35	36	0.51
2d	COD	2004	4aiii	IIA81d	14	6	0.31
2d	COD	2004	4aiii	none	6	1	0.1
2d	COD	2004	4aiv	IIA81c	3		
2d	COD	2004	4aiv	IIA81d	78	13	0.15
2d	COD	2004	4aiv	none	100		
2d	COD	2004	4av	IIA81d	23		
2d	COD	2004	4av	none	280	1	
2d	COD	2004	4biv	none	6		
2d	COD	2004	4ciii	none	1		
2d	COD	2004	4e	none	4		
2d	COD	2004	none	none	3		
2d	COD	2005	4aii	IIA81c	1		
2d	COD	2005	4aii	IIA81d	14	13	0.47
2d	COD	2005	4aii	none	21	41	0.66
2d	COD	2005	4aiii	IIA81d	8	9	0.52
2d	COD	2005	4aiii	none	2	2	0.56
2d	COD	2005	4aiv	IIA81c	2		0.01
2d	COD	2005	4aiv	IIA81d	87		
2d	COD	2005	4aiv	none	67		
2d	COD	2005	4av	IIA81d	34		0.01
2d	COD	2005	4av	none	246	2	0.01
2d	COD	2005	4biv	none	1		
2d	COD	2005	4cii	none	6		
2d	COD	2005	4e	none	5		
2d	COD	2006	4aii	IIA81c	1		
2d	COD	2006	4aii	IIA81d	13	47	0.78
2d	COD	2006	4aii	none	12	169	0.93
2d	COD	2006	4aiii	IIA81d	7	13	0.65
2d	COD	2006	4aiii	none	4	7	0.65
2d	COD	2006	4aiv	IIA81c	1		0.11
2d	COD	2006	4aiv	IIA81d	65	78	0.55
2d	COD	2006	4aiv	none	46	49	0.52
2d	COD	2006	4av	IIA81d	29	23	0.44
2d	COD	2006	4av	none	252	247	0.5
2d	COD	2006	4biv	none	1		
2d	COD	2006	4cii	none	8		
2d	COD	2006	4e	none	14		
2d	COD	2006	none	none	20		
2d	COD	2007	4aii	IIA81c	1		
2d	COD	2007	4aii	IIA81d	15	65	0.81
2d	COD	2007	4aii	none	30	135	0.82
2d	COD	2007	4aiii	IIA81d	11	43	0.8
2d	COD	2007	4aiii	none	9	34	0.79
2d	COD	2007	4aiv	IIA81c	2	4	0.66
2d	COD	2007	4aiv	IIA81d	51	100	0.66
2d	COD	2007	4aiv	none	93	426	0.82
2d	COD	2007	4av	IIA81c	2		
2d	COD	2007	4av	IIA81d	8	14	0.65
2d	COD	2007	4av	none	203	519	0.72
2d	COD	2007	4cii	none	13		
2d	COD	2007	4e	none	8		

Table 6.3.5.1 (continued) West of Scotland. Landings (t), discards (t) and relative discard rates by species and derogation, 2003-2007.

REG_AREA	SPECIES	YEAR	REG_GEAR	SPECON	LANDINGS	DISCARDS	DISC RATE BY GEAR
2d	HAD	2003	4aii	IIA81c	4		
2d	HAD	2003	4aii	IIA81d	272	546	0.67
2d	HAD	2003	4aii	none	424	827	0.66
2d	HAD	2003	4aiii	IIA81d	27	60	0.69
2d	HAD	2003	4aiii	none	98	212	0.68
2d	HAD	2003	4aiv	IIA81c	41	29	0.41
2d	HAD	2003	4aiv	IIA81d	586	591	0.5
2d	HAD	2003	4aiv	none	885	684	0.44
2d	HAD	2003	4av	IIA81d	194	124	0.39
2d	HAD	2003	4av	none	2794	1996	0.42
2d	HAD	2003	4biv	none	1		
2d	HAD	2003	4cii	none	2		
2d	HAD	2003	4e	none	1		
2d	HAD	2003	none	none	39	30	0.43
2d	HAD	2004	4ai	none	1		0.34
2d	HAD	2004	4aii	IIA81c	5		
2d	HAD	2004	4aii	IIA81d	183	558	0.75
2d	HAD	2004	4aii	none	230	767	0.77
2d	HAD	2004	4aiii	IIA81d	39	120	0.75
2d	HAD	2004	4aiii	none	44	110	0.71
2d	HAD	2004	4aiv	IIA81c	21	7	0.26
2d	HAD	2004	4aiv	IIA81d	583	1052	0.64
2d	HAD	2004	4aiv	none	458	220	0.32
2d	HAD	2004	4av	IIA81d	76	52	0.41
2d	HAD	2004	4av	none	1689	983	0.37
2d	HAD	2004	4biv	none	7		
2d	HAD	2004	4e	none	1		
2d	HAD	2004	none	none	14		
2d	HAD	2005	4aii	IIA81c	2		
2d	HAD	2005	4aii	IIA81d	68	677	0.91
2d	HAD	2005	4aii	none	137	1486	0.92
2d	HAD	2005	4aiii	IIA81d	25	186	0.88
2d	HAD	2005	4aiii	none	9	60	0.87
2d	HAD	2005	4aiv	IIA81c	1	1	0.26
2d	HAD	2005	4aiv	IIA81d	382	313	0.45
2d	HAD	2005	4aiv	none	273	94	0.26
2d	HAD	2005	4av	IIA81c	16		
2d	HAD	2005	4av	IIA81d	551	202	0.27
2d	HAD	2005	4av	none	1739	725	0.29
2d	HAD	2005	4biv	none	1		
2d	HAD	2005	4cii	none	3		
2d	HAD	2005	4e	none	4		
2d	HAD	2006	4aii	IIA81c	4		
2d	HAD	2006	4aii	IIA81d	55	253	0.82
2d	HAD	2006	4aii	none	112	541	0.83
2d	HAD	2006	4aiii	IIA81d	31	124	0.8
2d	HAD	2006	4aiii	none	8	25	0.77
2d	HAD	2006	4aiv	IIA81c	6	7	0.52
2d	HAD	2006	4aiv	IIA81d	563	558	0.5
2d	HAD	2006	4aiv	none	546	569	0.51
2d	HAD	2006	4av	IIA81d	998	946	0.49
2d	HAD	2006	4av	none	3411	2844	0.45
2d	HAD	2006	4biv	none	1		
2d	HAD	2006	4cii	none	6		
2d	HAD	2006	4e	none	5		
2d	HAD	2006	none	none	24		
2d	HAD	2007	4aii	IIA81c	3		
2d	HAD	2007	4aii	IIA81d	50	150	0.75
2d	HAD	2007	4aii	none	160	529	0.77
2d	HAD	2007	4aiii	IIA81d	36	108	0.75
2d	HAD	2007	4aiii	none	21	57	0.73
2d	HAD	2007	4aiv	IIA81c	62	57	0.48
2d	HAD	2007	4aiv	IIA81d	320	348	0.52
2d	HAD	2007	4aiv	none	902	880	0.49
2d	HAD	2007	4av	IIA81c	114		
2d	HAD	2007	4av	IIA81d	249	244	0.49
2d	HAD	2007	4av	none	1777	1577	0.47
2d	HAD	2007	4cii	none	10		
2d	HAD	2007	4e	none	5		
2d	HAD	2007	none	none	16		

Table 6.3.5.1 (continued) West of Scotland. Landings (t), discards (t) and relative discard rates by species and derogation, 2003-2007.

REG_AREA	SPECIES	YEAR	REG_GEAR	SPECON	LANDINGS	DISCARDS	DISC RATE BY GEAR
2d	HKE	2003	4aii	IIA81c	3		
2d	HKE	2003	4aii	IIA81d	45		
2d	HKE	2003	4aii	none	49		
2d	HKE	2003	4aiii	IIA81d	3		
2d	HKE	2003	4aiii	none	19		
2d	HKE	2003	4aiv	IIA81c	3		
2d	HKE	2003	4aiv	IIA81d	133		
2d	HKE	2003	4aiv	none	128		
2d	HKE	2003	4av	IIA81d	23		
2d	HKE	2003	4av	none	67		
2d	HKE	2003	4cii	none	11		
2d	HKE	2003	4e	none	85		
2d	HKE	2003	none	none	1		
2d	HKE	2004	4aii	IIA81c	2		
2d	HKE	2004	4aii	IIA81d	70		
2d	HKE	2004	4aii	none	85		
2d	HKE	2004	4aiii	IIA81d	11		
2d	HKE	2004	4aiii	none	12		
2d	HKE	2004	4aiv	IIA81c	1		
2d	HKE	2004	4aiv	IIA81d	308		
2d	HKE	2004	4aiv	none	189		
2d	HKE	2004	4av	IIA81d	24		
2d	HKE	2004	4av	none	119		
2d	HKE	2004	4cii	none	14		
2d	HKE	2004	4e	none	213		
2d	HKE	2004	none	none	9		
2d	HKE	2005	4aii	IIA81c	1		
2d	HKE	2005	4aii	IIA81d	38		
2d	HKE	2005	4aii	none	87		
2d	HKE	2005	4aiii	IIA81d	18		
2d	HKE	2005	4aiii	none	6		
2d	HKE	2005	4aiv	IIA81d	740		
2d	HKE	2005	4aiv	none	179		
2d	HKE	2005	4av	IIA81c	4		
2d	HKE	2005	4av	IIA81d	60		
2d	HKE	2005	4av	none	147		
2d	HKE	2005	4cii	none	31		
2d	HKE	2005	4e	none	699		
2d	HKE	2005	none	none	1		
2d	HKE	2006	4aii	IIA81c	1		
2d	HKE	2006	4aii	IIA81d	36		
2d	HKE	2006	4aii	none	94		
2d	HKE	2006	4aiii	IIA81d	25		
2d	HKE	2006	4aiii	none	13		
2d	HKE	2006	4aiv	IIA81d	589		
2d	HKE	2006	4aiv	none	131		
2d	HKE	2006	4av	IIA81d	63		
2d	HKE	2006	4av	none	138		
2d	HKE	2006	4cii	none	115		
2d	HKE	2006	4e	none	1127		
2d	HKE	2007	4aii	IIA81c	1		
2d	HKE	2007	4aii	IIA81d	16		
2d	HKE	2007	4aii	none	56		
2d	HKE	2007	4aiii	IIA81d	18		
2d	HKE	2007	4aiii	none	17		
2d	HKE	2007	4aiv	IIA81d	653		
2d	HKE	2007	4aiv	none	261		
2d	HKE	2007	4av	IIA81c	5		
2d	HKE	2007	4av	IIA81d	56		
2d	HKE	2007	4av	none	119		
2d	HKE	2007	4cii	none	338		
2d	HKE	2007	4e	none	1939		

Table 6.3.5.1 (continued) West of Scotland. Landings (t), discards (t) and relative discard rates by species and derogation, 2003-2007.

REG_AREA	SPECIES	YEAR	REG_GEAR	SPECON	LANDINGS	DISCARDS	DISC RATE BY GEAR
2d	NEP	2003	4aii	IIA81c	232		
2d	NEP	2003	4aii	IIA81d	6428		
2d	NEP	2003	4aii	none	538		
2d	NEP	2003	4aiii	IIA81d	487		
2d	NEP	2003	4aiii	none	373		
2d	NEP	2003	4aiv	IIA81c	7		
2d	NEP	2003	4aiv	IIA81d	212		
2d	NEP	2003	4aiv	none	119		
2d	NEP	2003	4av	IIA81d	20		
2d	NEP	2003	4av	none	47		
2d	NEP	2003	4biv	none	2		
2d	NEP	2003	none	none	369		
2d	NEP	2004	4aii	IIA81c	140		
2d	NEP	2004	4aii	IIA81d	5669		
2d	NEP	2004	4aii	none	860		
2d	NEP	2004	4aiii	IIA81d	752		
2d	NEP	2004	4aiii	none	383		
2d	NEP	2004	4aiv	IIA81c	12		
2d	NEP	2004	4aiv	IIA81d	106		
2d	NEP	2004	4aiv	none	58		
2d	NEP	2004	4av	IIA81d	4		
2d	NEP	2004	4av	none	16		
2d	NEP	2004	none	none	429		
2d	NEP	2005	4aii	IIA81c	81		
2d	NEP	2005	4aii	IIA81d	5541		
2d	NEP	2005	4aii	none	1187		
2d	NEP	2005	4aiii	IIA81d	749		
2d	NEP	2005	4aiii	none	171		
2d	NEP	2005	4aiv	IIA81c	2		
2d	NEP	2005	4aiv	IIA81d	275		
2d	NEP	2005	4aiv	none	90		
2d	NEP	2005	4av	none	1		
2d	NEP	2005	none	none	456		
2d	NEP	2006	4aii	IIA81c	109		
2d	NEP	2006	4aii	IIA81d	6942		
2d	NEP	2006	4aii	none	1772		
2d	NEP	2006	4aiii	IIA81d	1184		
2d	NEP	2006	4aiii	none	331		
2d	NEP	2006	4aiv	IIA81c	6		
2d	NEP	2006	4aiv	IIA81d	411		
2d	NEP	2006	4aiv	none	101		
2d	NEP	2006	4av	none	2		
2d	NEP	2006	none	none	535		
2d	NEP	2007	4ai	none	1		
2d	NEP	2007	4aii	IIA81c	158		
2d	NEP	2007	4aii	IIA81d	7422		
2d	NEP	2007	4aii	none	2750		
2d	NEP	2007	4aiii	IIA81d	1945		
2d	NEP	2007	4aiii	none	624		
2d	NEP	2007	4aiv	IIA81c	4		
2d	NEP	2007	4aiv	IIA81d	419		
2d	NEP	2007	4aiv	none	84		
2d	NEP	2007	4av	none	7		
2d	NEP	2007	none	none	541		

Table 6.3.5.1 (continued) West of Scotland. Landings (t), discards (t) and relative discard rates by species and derogation, 2003-2007.

REG_AREA	SPECIES	YEAR	REG_GEAR	SPECON	LANDINGS	DISCARDS	DISC RATE BY GEAR
2d	PLE	2003	4aii	IIA81d	14		
2d	PLE	2003	4aii	none	119		
2d	PLE	2003	4aiii	IIA81d	5		
2d	PLE	2003	4aiii	none	16		
2d	PLE	2003	4aiv	IIA81c	39		
2d	PLE	2003	4aiv	IIA81d	31		
2d	PLE	2003	4aiv	none	53		
2d	PLE	2003	4av	IIA81c	1		
2d	PLE	2003	4av	IIA81d	1		
2d	PLE	2003	4av	none	73		
2d	PLE	2003	4biv	none	42		
2d	PLE	2003	none	none	5		
2d	PLE	2004	4aii	IIA81d	9		
2d	PLE	2004	4aii	none	47		
2d	PLE	2004	4aiii	IIA81d	9		
2d	PLE	2004	4aiii	none	4		
2d	PLE	2004	4aiv	IIA81c	18		
2d	PLE	2004	4aiv	IIA81d	12		
2d	PLE	2004	4aiv	none	28		
2d	PLE	2004	4av	IIA81d	7		
2d	PLE	2004	4av	none	41		
2d	PLE	2004	4bi	none	2		
2d	PLE	2004	4biv	none	10		
2d	PLE	2004	none	none	16		
2d	PLE	2005	4aii	IIA81d	7		
2d	PLE	2005	4aii	none	41		
2d	PLE	2005	4aiii	IIA81d	6		
2d	PLE	2005	4aiv	IIA81c	3		
2d	PLE	2005	4aiv	IIA81d	5		
2d	PLE	2005	4aiv	none	14		
2d	PLE	2005	4av	IIA81c	1		
2d	PLE	2005	4av	none	15		
2d	PLE	2005	4biv	none	9		
2d	PLE	2006	4aii	IIA81d	7		
2d	PLE	2006	4aii	none	23		
2d	PLE	2006	4aiii	IIA81d	3		
2d	PLE	2006	4aiii	none	1		
2d	PLE	2006	4aiv	IIA81c	6		
2d	PLE	2006	4aiv	IIA81d	7		
2d	PLE	2006	4aiv	none	6		
2d	PLE	2006	4av	none	18		
2d	PLE	2007	4aii	IIA81d	2		
2d	PLE	2007	4aii	none	22		
2d	PLE	2007	4aiii	IIA81d	4		
2d	PLE	2007	4aiii	none	4		
2d	PLE	2007	4aiv	IIA81c	2		
2d	PLE	2007	4aiv	IIA81d	4		
2d	PLE	2007	4aiv	none	13		
2d	PLE	2007	4av	IIA81c	1		
2d	PLE	2007	4av	none	26		

Table 6.3.5.1 (continued) West of Scotland. Landings (t), discards (t) and relative discard rates by species and derogation, 2003-2007.

REG_AREA	SPECIES	YEAR	REG_GEAR	SPECON	LANDINGS	DISCARDS	DISC RATE BY GEAR
2d	POK	2003	4aii	IIA81d	10	19	0.66
2d	POK	2003	4aii	none	53	151	0.74
2d	POK	2003	4aiii	none	23	96	0.81
2d	POK	2003	4aiv	IIA81c	3		0.05
2d	POK	2003	4aiv	IIA81d	3258	6749	0.67
2d	POK	2003	4aiv	none	549	1125	0.67
2d	POK	2003	4av	IIA81d	91	96	0.51
2d	POK	2003	4av	none	996	1808	0.64
2d	POK	2003	4cii	none	15		
2d	POK	2003	none	none	9		
2d	POK	2004	4aii	IIA81d	7	11	0.61
2d	POK	2004	4aii	none	27	45	0.62
2d	POK	2004	4aiii	IIA81d	3	11	0.79
2d	POK	2004	4aiii	none	2	5	0.74
2d	POK	2004	4aiv	IIA81c	1		0.05
2d	POK	2004	4aiv	IIA81d	2804	618	0.18
2d	POK	2004	4aiv	none	395	75	0.16
2d	POK	2004	4av	IIA81d	213	33	0.14
2d	POK	2004	4av	none	1032	200	0.16
2d	POK	2004	4biv	none	6		
2d	POK	2004	4e	none	1		
2d	POK	2004	none	none	5		
2d	POK	2005	4aii	IIA81d	1	2	0.68
2d	POK	2005	4aii	none	26	51	0.66
2d	POK	2005	4aiii	IIA81d	2	6	0.72
2d	POK	2005	4aiii	none	1		
2d	POK	2005	4aiv	IIA81c	1	1	0.53
2d	POK	2005	4aiv	IIA81d	3865	2603	0.4
2d	POK	2005	4aiv	none	373	109	0.23
2d	POK	2005	4av	IIA81d	503	662	0.57
2d	POK	2005	4av	none	1405	1698	0.55
2d	POK	2005	4cii	none	3		
2d	POK	2005	4e	none	4		
2d	POK	2006	4aii	IIA81d	1	21	0.98
2d	POK	2006	4aii	none	9	195	0.95
2d	POK	2006	4aiii	IIA81d	2	28	0.94
2d	POK	2006	4aiv	IIA81d	5831	923	0.14
2d	POK	2006	4aiv	none	747	401	0.35
2d	POK	2006	4av	IIA81d	636	349	0.35
2d	POK	2006	4av	none	1927	1125	0.37
2d	POK	2006	4biv	none	2		
2d	POK	2006	4cii	none	65		
2d	POK	2006	4ciii	none	3		
2d	POK	2006	4e	none	7		
2d	POK	2006	none	none	7		
2d	POK	2007	4aii	IIA81d	1	2	0.74
2d	POK	2007	4aii	none	4	26	0.86
2d	POK	2007	4aiii	IIA81d	2	6	0.71
2d	POK	2007	4aiv	IIA81c	1		0.08
2d	POK	2007	4aiv	IIA81d	4018	335	0.08
2d	POK	2007	4aiv	none	721	183	0.2
2d	POK	2007	4av	IIA81d	128	54	0.3
2d	POK	2007	4av	none	1141	348	0.23
2d	POK	2007	4cii	none	279		
2d	POK	2007	4e	none	17		
2d	POK	2007	none	none	1		
2d	SOL	2003	4aii	IIA81d	1		
2d	SOL	2003	4aii	none	24		
2d	SOL	2003	4aiii	none	4		
2d	SOL	2003	4aiv	IIA81d	1		
2d	SOL	2003	4aiv	none	1		
2d	SOL	2003	none	none	3		
2d	SOL	2004	4aii	IIA81d	1		
2d	SOL	2004	4aii	none	16		
2d	SOL	2004	4aiii	none	2		
2d	SOL	2004	4aiv	none	2		
2d	SOL	2004	none	none	5		
2d	SOL	2005	4aii	IIA81d	1		
2d	SOL	2005	4aii	none	15		
2d	SOL	2005	4aiv	none	1		
2d	SOL	2006	4aii	IIA81d	1		
2d	SOL	2006	4aii	none	11		
2d	SOL	2007	4aii	IIA81d	1		
2d	SOL	2007	4aii	none	16		
2d	SOL	2007	4aiii	IIA81d	1		
2d	SOL	2007	4aiii	none	2		
2d	SOL	2007	4aiv	none	2		

Table 6.3.5.1 (continued) West of Scotland. Landings (t), discards (t) and relative discard rates by species and derogation, 2003-2007.

REG_AREA	SPECIES	YEAR	REG_GEAR	SPECON	LANDINGS	DISCARDS	DISC RATE BY GEAR
2d	WHG	2003	4aii	IIA81c	1		
2d	WHG	2003	4aii	IIA81d	95	775	0.89
2d	WHG	2003	4aii	none	485	2935	0.86
2d	WHG	2003	4aiii	IIA81d	7	86	0.92
2d	WHG	2003	4aiii	none	72	555	0.89
2d	WHG	2003	4aiv	IIA81c	5	2	0.25
2d	WHG	2003	4aiv	IIA81d	166	204	0.55
2d	WHG	2003	4aiv	none	162	42	0.21
2d	WHG	2003	4av	IIA81d	30	8	0.2
2d	WHG	2003	4av	none	317	124	0.28
2d	WHG	2003	none	none	8		
2d	WHG	2004	4aii	IIA81d	77	856	0.92
2d	WHG	2004	4aii	none	264	1541	0.85
2d	WHG	2004	4aiii	IIA81d	10	56	0.85
2d	WHG	2004	4aiii	none	16	100	0.87
2d	WHG	2004	4aiv	IIA81c	6	6	0.51
2d	WHG	2004	4aiv	IIA81d	125	1006	0.89
2d	WHG	2004	4aiv	none	140	338	0.71
2d	WHG	2004	4av	IIA81d	4	8	0.7
2d	WHG	2004	4av	none	152	157	0.51
2d	WHG	2004	none	none	6		
2d	WHG	2005	4aii	IIA81d	34	361	0.91
2d	WHG	2005	4aii	none	155	2387	0.94
2d	WHG	2005	4aiii	IIA81d	14	103	0.88
2d	WHG	2005	4aiii	none	1	4	0.81
2d	WHG	2005	4aiv	IIA81d	48	152	0.76
2d	WHG	2005	4aiv	none	34	29	0.46
2d	WHG	2005	4av	IIA81d	1	1	0.46
2d	WHG	2005	4av	none	49	55	0.53
2d	WHG	2006	4aii	IIA81d	24	385	0.94
2d	WHG	2006	4aii	none	161	2957	0.95
2d	WHG	2006	4aiii	IIA81d	11	152	0.94
2d	WHG	2006	4aiii	none	1	17	0.93
2d	WHG	2006	4aiv	IIA81c	1		0.2
2d	WHG	2006	4aiv	IIA81d	58	28	0.32
2d	WHG	2006	4aiv	none	44	7	0.13
2d	WHG	2006	4av	none	81	28	0.25
2d	WHG	2007	4aii	IIA81d	22	106	0.83
2d	WHG	2007	4aii	none	22	10	0.3
2d	WHG	2007	4aiii	IIA81d	22	66	0.75
2d	WHG	2007	4aiii	none	4	11	0.73
2d	WHG	2007	4aiv	IIA81c	1		0.15
2d	WHG	2007	4aiv	IIA81d	102	30	0.23
2d	WHG	2007	4aiv	none	51	18	0.26
2d	WHG	2007	4av	IIA81c	14		
2d	WHG	2007	4av	IIA81d	7	2	0.19
2d	WHG	2007	4av	none	236	32	0.12

Table 6.3.5.2 West of Scotland. Cod landings (L) and discards (D) at ages 1-9 (‘000) by derogation, 2003-2007.

REG_AREA	REG_GEAR	SPECON	AGE	2003 L	2003 D	2004 L	2004 D	2005 L	2005 D	2006 L	2006 D	2007 L	2007 D
2d	4aii	IIA81d	1	4	18	4	77	2	34	1	198	1	64
2d	4aii	IIA81d	2	60	9	10	1	8	5	4	5	9	78
2d	4aii	IIA81d	3	8	1	5		2		2	1	2	
2d	4aii	IIA81d	4	5				1					
2d	4aii	IIA81d	5			2							
2d	4aii	IIA81d	6										
2d	4aii	IIA81d	7										
2d	4aii	IIA81d	8										
2d	4aii	IIA81d	9										
2d	4aii	none	1	8	24	7	127	8	68	7	405	5	74
2d	4aii	none	2	60	13	10	1	9	5	3	8	10	109
2d	4aii	none	3	8	2	4		1		1		2	
2d	4aii	none	4	5				1					
2d	4aii	none	5			2							
2d	4aii	none	6										
2d	4aii	none	7										
2d	4aii	none	8										
2d	4aii	none	9										
2d	4aiii	IIA81d	1		3	1	26	1	19	1	62		52
2d	4aiii	IIA81d	2	10	1	4		4	3	2	2	7	52
2d	4aiii	IIA81d	3	1		2		1		1		2	
2d	4aiii	IIA81d	4	1									
2d	4aiii	IIA81d	5			1							
2d	4aiii	IIA81d	6										
2d	4aiii	IIA81d	7										
2d	4aiii	IIA81d	8										
2d	4aiii	IIA81d	9										
2d	4aiii	none	1	1	4		4		3		38		37
2d	4aiii	none	2	12	1	2		1		1	1	5	38
2d	4aiii	none	3	2		1				1		1	
2d	4aiii	none	4	1									
2d	4aiii	none	5										
2d	4aiii	none	6										
2d	4aiii	none	7										
2d	4aiii	none	8										
2d	4aiii	none	9										
2d	4aiv	IIA81c	1										
2d	4aiv	IIA81c	2	2								1	3
2d	4aiv	IIA81c	3			1							
2d	4aiv	IIA81c	4										
2d	4aiv	IIA81c	5										
2d	4aiv	IIA81c	6										
2d	4aiv	IIA81c	7										
2d	4aiv	IIA81c	8										
2d	4aiv	IIA81c	9										

Table 6.3.5.2 (continued) West of Scotland. Cod landings (L) and discards (D) at ages 1-9 ('000) by derogation, 2003-2007.

REG_AREA	REG_GEAR	SPECON	AGE	2003 L	2003 D	2004 L	2004 D	2005 L	2005 D	2006 L	2006 D	2007 L	2007 D
2d	4aiv	IIA81d	1	2	2	6	42	6		1	162		1
2d	4aiv	IIA81d	2	46	1	14		17		14	6	19	93
2d	4aiv	IIA81d	3	6	1	14		8		10	4	5	4
2d	4aiv	IIA81d	4	9		1		7		3	1	3	1
2d	4aiv	IIA81d	5	1		4		1		1	1		
2d	4aiv	IIA81d	6					1					
2d	4aiv	IIA81d	7										
2d	4aiv	IIA81d	8										
2d	4aiv	IIA81d	9										
2d	4aiv	none	1	4		5		3		1	45		5
2d	4aiv	none	2	96		18		12		9	7	36	329
2d	4aiv	none	3	16		19		6		7	5	7	12
2d	4aiv	none	4	29		2		6		2	1	5	7
2d	4aiv	none	5	2		5		1		1	1	1	1
2d	4aiv	none	6					1					1
2d	4aiv	none	7	1									
2d	4aiv	none	8										
2d	4aiv	none	9										
2d	4av	IIA81d	1			1		4			31		
2d	4av	IIA81d	2	6		6		7		4	3	2	12
2d	4av	IIA81d	3	1		5		3		4	2	1	1
2d	4av	IIA81d	4	2				2		2		1	
2d	4av	IIA81d	5			1				1			
2d	4av	IIA81d	6										
2d	4av	IIA81d	7										
2d	4av	IIA81d	8										
2d	4av	IIA81d	9										
2d	4av	none	1	12	6	18	1	9	2	5	281		2
2d	4av	none	2	244	4	46	2	49	4	43	33	56	409
2d	4av	none	3	39	1	50		22		37	24	26	19
2d	4av	none	4	65		5		22		14	2	14	5
2d	4av	none	5	5		13		4		6	3	1	1
2d	4av	none	6	1		1		3		1	1	1	1
2d	4av	none	7	1								1	
2d	4av	none	8										
2d	4av	none	9										
2d	none	none	1										
2d	none	none	2										
2d	none	none	3										
2d	none	none	4										
2d	none	none	5										
2d	none	none	6										
2d	none	none	7										
2d	none	none	8										
2d	none	none	9										

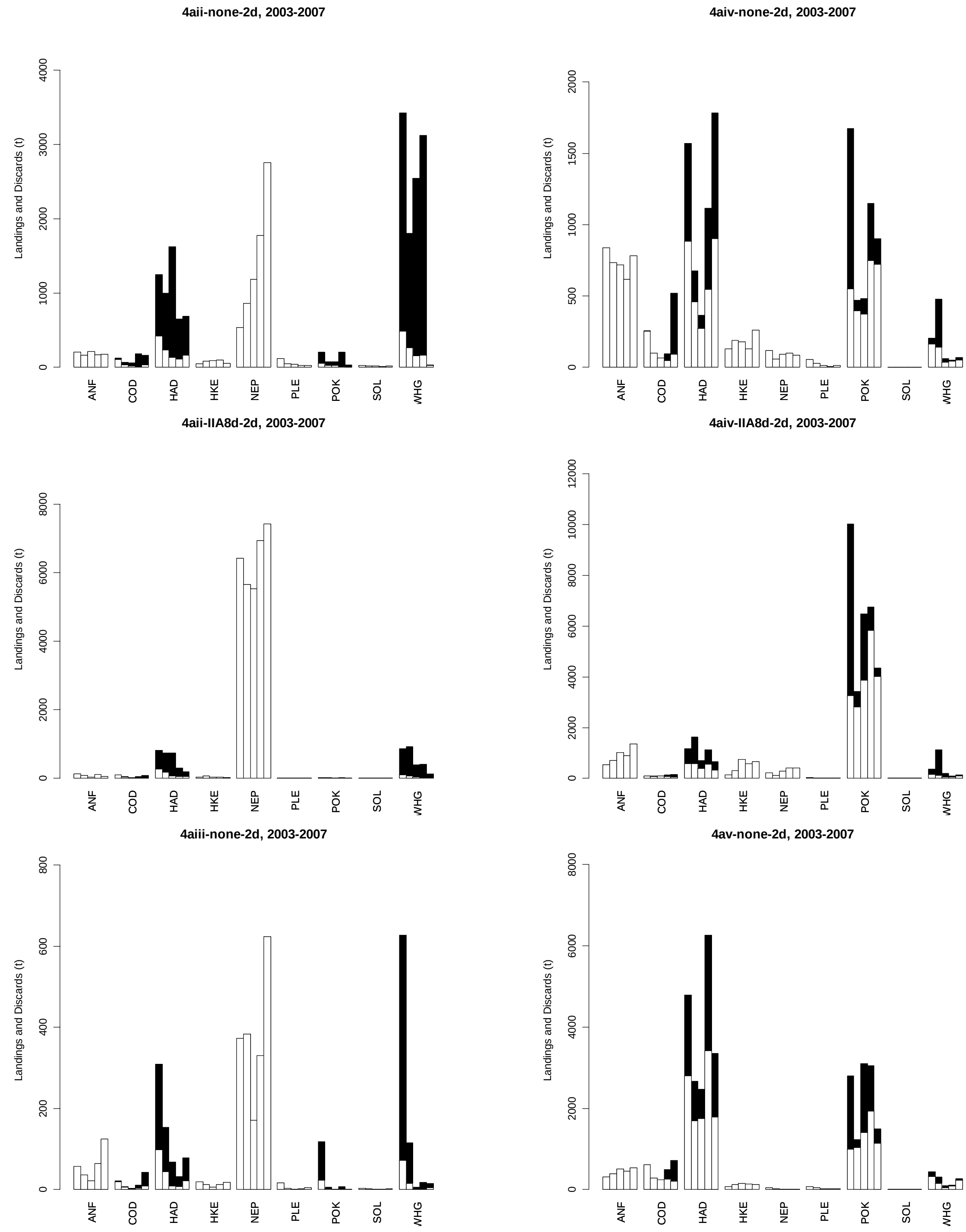


Figure 6.3.5.1 West of Scotland. Landings (t) and discard (t) by derogation and species, 2003-2007 (from left to right).). White bars represent landings, black bars discards. Note that discard data are only available for some species (COD, HAD, POK and WHG) and gears. The lack of discard information for other species in this figure represents no information rather than zero discards.

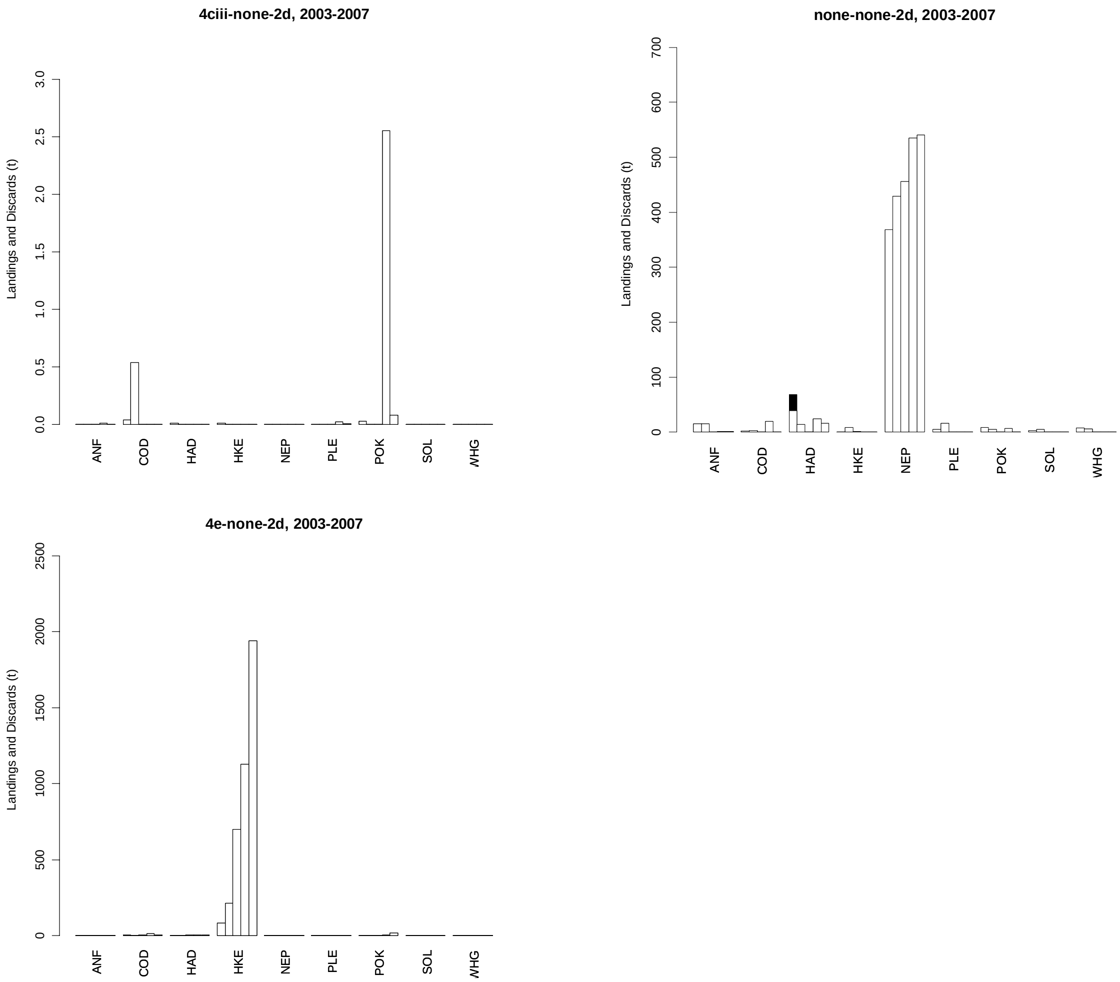


Figure 6.3.5.2 West of Scotland. Landings (t) and discard (t) by derogation and species, 2003-2007 (from left to right).). White bars represent landings, black bars discards. Note that discard data are only available for some species (COD, HAD, POK and WHG) and gears. The lack of discard information for a given species/gear in this figure represents no information rather than zero discards.

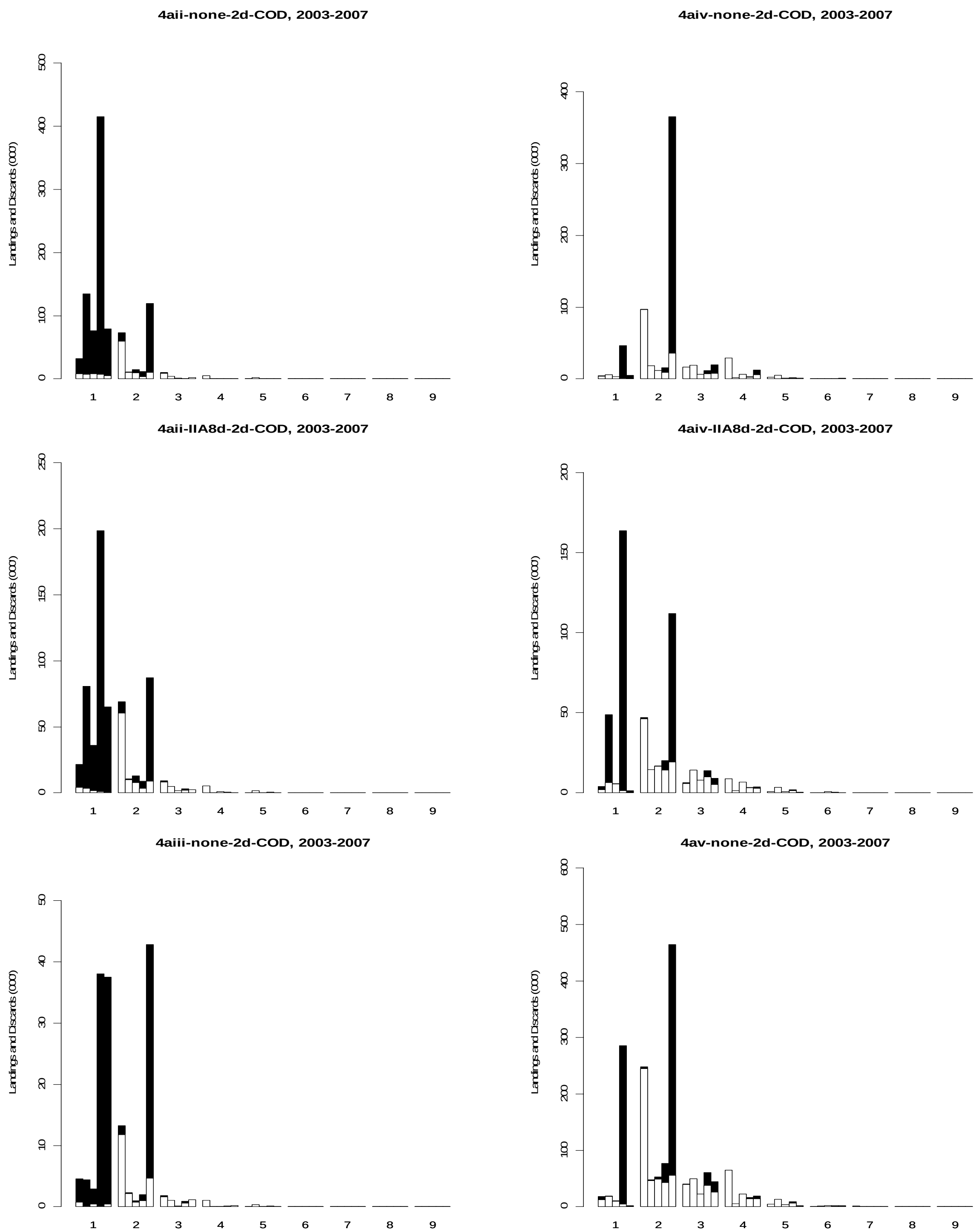


Figure 6.3.5.3 West of Scotland. Cod landings and discards ('000) at ages 1-9 by major derogations, 2003-2007 (from left to right). White bars represent landings, black bars discards.

Information on landings made by Spain from VIa were not available for inclusion in the STECF database but were provided subsequently. The Spanish fleet in ICES Division VIa is composed of bottom longliners (77% of the landings), bottom trawlers (20%), surface longliners (2%), nets (0.4%) and others (0.8%). The fleet fishes mainly in the second and fourth quarters of the year; in 2007 landed 3972 tonnes (Table 6.3.5.3), 20% of the landings were made in Ireland.

Table 6.3.5.3.- 2007 total Spanish landings (t) from the ICES Division VIa by species.

SPECIES	LANDINGS (T)	%
HKE	1 091.91	27.49
BRF	537.10	13.52
COE	401.20	10.10
FOR	335.12	8.44
POA	325.05	8.18
SKA	292.80	7.37
LNZ	174.85	4.41
GFB	167.34	4.21
ALC	136.38	3.43
RNG	117.80	2.97
TSU	105.27	2.65
BPB	69.50	1.75
WRF	54.13	1.36
BSH	26.21	0.66
ALF	20.70	0.52
SWO	15.02	0.38
USK	11.18	0.28
RED	9.74	0.25
DGS	8.29	0.21
FOX	7.65	0.19
SMA	6.89	0.17
DGX	6.53	0.16

LEZ	6.32	0.16
SCO	6.21	0.16
BSF	5.01	0.13
HAD	4.53	0.11
ANF	3.84	0.10
GAG	3.47	0.09
GHL	2.87	0.07
SQC	2.60	0.07
SFS	2.59	0.07
SRX	2.51	0.06
SBR	2.33	0.06
ARG	2.20	0.06
GPD	2.02	0.05
HOL	1.26	0.03
MAC	1.18	0.03
EPI	0.83	0.02
LEM	0.71	0.02
WIT	0.48	0.01
Others	0.31	0.01
COD	0.00	0.00
TOTAL	**3971.92**	**100.00**

Landings composition of the bottom longliners and trawlers are shown in Tables 6.3.5.4 and 6.3.5.5 respectively. (Source: logbooks).

Hake (27% of the landings), *Helicolenus dactylopterus* (16%), conger (10%), *Phycis phycis* (8%), *Brama brama* (8%) and *Raja spp*. (7%) make up the 75% of the total Spanish landings from the area (Table 6.3.5.3). Landings of cod are zero.

If we split the landings by gear, hake (34% of the landings), *Helicolenus dactylopterus* (17%), *Phycis spp.* (15%) and conger (12%) add the 79% of the landings from the Spanish bottom longliners in VIa (Table 6.3.5.4).

Table 6.3.5.4.- 2007 landings (t) of the Spanish bottom longliners in the ICES Division VIa.

SPECIES	**LANDINGS (T)**	**%**
Merluccius merluccius	1 049.53	34.30
Helicolenus dactylopterus	526.50	17.21
Phycis spp	467.37	15.27
Conger conger	381.67	12.47
Brama brama	317.09	10.36
Molva spp	140.07	4.58
Raja spp	63.20	2.07
Polyprion americanus	53.71	1.76
Beryx spp	20.70	0.68
Brosme brosme	10.47	0.34
Sebastes spp	9.74	0.32
Squalus acanthias	7.68	0.25
Galeorhinus galeus	3.47	0.11
Pagellus bogaraveo	2.33	0.08
Argentina spp	2.20	0.07
Squalidae	1.83	0.06
Scorpaenidae	1.42	0.05
Epigonus telescopus	0.83	0.03
Lamna nasus	0.10	0.00
Lophius spp	0.02	0.00
Gadus morhua	0.00	0.00
Total	**3 059.92**	**100.00**

Spanish bottom trawlers at the ICES Division VIa carry out a multi-species fishery for deep-water species: *Raja spp* (29% of the landings), Baird's smoothhead (17%), roundnose grenadier (15%), roughsnout grenadier (13%) form the 75% of the landings.

The only discard data for the Spanish fleet in ICES Division VIa come from the Basque fleet collected by AZTI (Basque Country). The Basque fleet in this area prosecutes a bottom trawl fishery with hake and *Lophius piscatorius* as target species and *Macrourus spp.* as bycatch species. Discards are mainly composed of *Argentina spp.* (54% of the discards) and *Chimaera monstruosa* (13%), species with no commercial value. Small sizes of *Helicolenus dactilopterus* are also discarded. Other species that are occasionally discarded are *Brosme brosme*, *Macrourus spp.*, invertebrates, *Pollachius virens*, *Scyliorhinus canicula*, *Micromesistius poutassou*, *Chaceon affinis*, *Alepocephalus bairdii, Galeus melastomus, Etmopterus spinax* or *Trichiurus lepturus.*

Table 6.3.5.5.- 2007 landings (t) of the Spanish bottom trawlers in the ICES Division VIa.

SPECIES	**LANDINGS (T)**	**%**
Raja spp	232.11	29.49
Alepocephalus bairdii	136.38	17.33
Coryphaenoides rupestris	117.80	14.97
Trachyrincus scabrus	105.27	13.37
Pterycombus brama	67.80	8.61
Phycis spp	42.74	5.43
Molva spp	34.78	4.42
Lepidorhombus spp	6.30	0.80
Aphanopus carbo	5.01	0.64
Scorpaenidae	4.79	0.61
Squalidae	4.70	0.60
Melanogrammus aeglefinus	4.53	0.58
Conger conger	3.84	0.49
Lophius spp	3.79	0.48
Merluccius merluccius	3.42	0.43
Reinhardtius hippoglossoides	2.87	0.36
Loligo spp	2.60	0.33
Lepidopus caudatus	2.59	0.33
Epinephelus marginatus	2.02	0.26

Chimaeriformes	1.26	0.16
Microstomus kitt	0.71	0.09
Brosme brosme	0.71	0.09
Squalus acanthias	0.61	0.08
Glyptocephalus cynoglossus	0.48	0.06
Gadus morhua	0.00	0.00
Total	**787.12**	**100.00**

6.4. Trends in CPUE of cod, plaice and sole

6.4.1. General considerations regarding CPUE estimates

STECF-SGRST notes that CPUE series are often interpreted and used as stock abundance indicator. However, STECF-SGRST emphasises that the presented trends in CPUE by fleets are subject to selective fishing strategies (area, gear, mesh size etc.) and thus maybe biased. On the other hand, CPUE derived from targeted fisheries may provide very useful information on stock abundance trends. Furthermore, it must be taken into consideration that the majority of the CPUE trends represent only overall weights in the landings (LPUE) without discards or with poorly estimated discards. Ideally, the CPUE should be based on age disaggregated abundance rather than overall weights and reflect technological creep when trends over longer periods are evaluated. Time constraints prevented STECF-SGRST from estimations of CPUE trends by age and full evaluations of these. STECF-SGRST recommends that CPUE in units of numbers at age/(kw*days) be estimated and compared with the recent assessment results provided by ICES.

STECF-SGRST presents CPUE by derogations given units of g/(kW*days) in the following sections by management area. Most weight was assigned to the catch rates of cod, plaice and sole of the various derogations in order to evaluate their potential effects to avoid such catches. Where discard estimates are not available, the trends in LPUE (landings per unit of effort) are given in the same units.

6.4.2. Trend in CPUE of cod, sole and plaice by derogation in management area 2a: Kattegat

The absence of Danish discard data and the lack of special condition information for Danish landings in 2007 creates serious problems for interpretation of CPUE. Sweden provided discard data for gear category 4a aiii (90 mm trawl) from 2003-2007 and for 4aiii special condition IIA81a (120mm square mesh window) as well as 4aii special condition IIA83b (mm sorting grid) for 2007.

	COD		NEP		PLE		SOL	
Gear group	% 2003-2007	% of 2007	% 2003-2007	% of 2007	% 2003-2007	% of 2007	% 2003-2007	% of 2007
ai	0,8	1,1	0,16	0	0,1	0	0	0
aii	0,1	2,3	11,62	5,8	1,3	0,1	4,6	0,2
aiii	**75,1**	**73,9**	**86,76**	**91,3**	**50,6**	**44,9**	**47,2**	**58**
aiv	6,1	5,5	0,35	0,6	22,9	29,9	1,9	1,8
av	5,5	2,5	0,29	1,1	2	1,1	0,4	0,5
ci	1,5	1	0,01	0	1,7	1,2	13	13,3
cii	3,3	3,2	0,01	0	5,8	7	5,9	6,9
ciii	0,8	0,7	0	0	0,3	0,2	0,2	0,1
civ	0	0,1	0	0	0,1	0,1	0,2	0
4d	0	0	0,01	0	0,1	0	0,1	0,1
4e	0,1	0,2	0	0	0	0	0	0
none	6,7	9,6	0,79	1,2	15,1	15,4	**26,5**	**19**

The main gear group both in terms of effort and % of landings of Cod, Plaice and Sole is the gear group aiii (90mm trawl fishery)

The absence of discard data from the Danish fisheries makes it impossible to estimate discard - and catch rates from the entire Kattegat fisheries and hence also CPUE of the four species. Due to differences in national management systems as well as differences in fishing patterns it is not possible to consider the Swedish discard data representative for the Danish fishery. In Sweden the fishery is managed by weekly rations while Denmark in 2007 introduced individual vessel quotas. The fisheries in Sweden is also characterised by long periods of prohibition to land different species, particularly cod (for example in 2006 the cod fishery in Kattegatt were closed for 8 months). The different management regimes have implications on the discard patterns of fish, particularly fish discarded for quota reasons which for cod is an important problem in the Kattegat.

The following tables Table 6.4.2.1 and 6.4.2.2 and 6.4.2.3 provide detail. The CPUE figures in the table should only be considered indicative since Swedish discard ratios, which could not be considered representative for the Danish fisheries, have been used to estimate Danish discards due to absence of Danish discard data in 2007. Further note that the Danish landings data for 2007 only are available by gear categories and not by special condition. Absence of this detailed data makes impact assessment of different special conditions on fishing mortality impossible.

Table 6.4.2.1 Kattegat: Cod CPUE (g/KW*days) by derogation and year, 2003-2007

SPECIES	ANNEX	REG AREA	REG GEAR	SPECON	CPUE 2003	CPUE 2004	CPUE 2005	CPUE 2006	CPUE 2007
COD	IIa	2a	4ai	none	85	24	31	14	20
COD	IIa	2a	4aii	IIA81b					31
COD	IIa	2a	4aii	IIA81d	81	18			
COD	IIa	2a	4aii	none	107	127	66	330	13
COD	IIa	2a	4aiii	IIA81a				67	110
COD	IIa	2a	4aiii	IIA81d	229	227	113	50	
COD	IIa	2a	4aiii	IIA81l				181	
COD	IIa	2a	4aiii	none	451	537	366	529	606
COD	IIa	2a	4aiv	IIA81a				211	79
COD	IIa	2a	4aiv	IIA81c	426	181	240	18	
COD	IIa	2a	4aiv	IIA81d	4	427			
COD	IIa	2a	4aiv	none	529	438	670	197	244
COD	IIa	2a	4av	IIA81a				15	252
COD	IIa	2a	4av	IIA81c	542		154		
COD	IIa	2a	4av	IIA81d	331				
COD	IIa	2a	4av	none	617	604	352	151	977
COD	IIa	2a	4ci	none	135	164	90	148	100
COD	IIa	2a	4cii	none	256	332	320	536	188
COD	IIa	2a	4ciii	none	1151	748	476	116	345
COD	IIa	2a	4civ	IIA81f		1			
COD	IIa	2a	4civ	none	20	73	124	5	8
COD	IIa	2a	4d	none	4		83	45	
COD	IIa	2a	4e	none	680	1091	39	93	20
COD	IIa	2a	none	none	3815	1523	1632	1121	392

Table 6.4.2.2 Kattegat: Plaice CPUE (g/KW*days) by derogation and year, 2003-2007

SPECIES	ANNEX	REG AREA	REG GEAR	SPECON	CPUE 2003	CPUE 2004	CPUE 2005	CPUE 2006	CPUE 2007
PLE	IIa	2a	4ai	none	12	1	0	2	2
PLE	IIa	2a	4aii	IIA81b					118
PLE	IIa	2a	4aii	IIA81d	75	8	1		
PLE	IIa	2a	4aii	none	75	55	65	185	67
PLE	IIa	2a	4aiii	IIA81a				74	237
PLE	IIa	2a	4aiii	IIA81d	1945	337	45	830	
PLE	IIa	2a	4aiii	IIA81l				214	
PLE	IIa	2a	4aiii	none	609	275	248	389	976
PLE	IIa	2a	4aiv	IIA81a				2043	16
PLE	IIa	2a	4aiv	IIA81c	1784	2534	2855	4238	
PLE	IIa	2a	4aiv	IIA81d	136	102			
PLE	IIa	2a	4aiv	none	734	954	1068	1901	3675
PLE	IIa	2a	4av	IIA81a				5172	174
PLE	IIa	2a	4av	IIA81c	652		46		
PLE	IIa	2a	4av	IIA81d	18				
PLE	IIa	2a	4av	none	890	1043	369	281	512
PLE	IIa	2a	4ci	none	524	562	288	358	214
PLE	IIa	2a	4cii	none	401	1206	813	1114	1039
PLE	IIa	2a	4ciii	none	191	955	253	454	180
PLE	IIa	2a	4civ	IIA81f	5				
PLE	IIa	2a	4civ	none	35	15	84	51	51
PLE	IIa	2a	4d	none	11	8	172	876	503
PLE	IIa	2a	4e	none	0			0	0
PLE	IIa	2a	none	none	5407	3068	2747	2831	2342

Table 6.4.2.3 Kattegat: Sole CPUE (g/KW*days) by derogation and year, 2003-2007

SPECIES	ANNEX	REG AREA	REG GEAR	SPECON	CPUE 2003	CPUE 2004	CPUE 2005	CPUE 2006	CPUE 2007
SOL	IIa	2a	4ai	none	1	0	0	0	0
SOL	IIa	2a	4aii	IIA81b		0	4	3	4
SOL	IIa	2a	4aii	IIA81d	16	37	19	26	
SOL	IIa	2a	4aii	none	23	55	55	174	7
SOL	IIa	2a	4aiii	IIA81a				35	9
SOL	IIa	2a	4aiii	IIA81d	11	9	5	17	
SOL	IIa	2a	4aiii	IIA81l				97	
SOL	IIa	2a	4aiii	none	34	110	87	98	110
SOL	IIa	2a	4aiv	IIA81a				74	0
SOL	IIa	2a	4aiv	IIA81c	28	17	34	1	
SOL	IIa	2a	4aiv	IIA81d		1			
SOL	IIa	2a	4aiv	none	20	26	88	87	63
SOL	IIa	2a	4av	IIA81a				4	5
SOL	IIa	2a	4av	IIA81c	32		346		
SOL	IIa	2a	4av	IIA81d	1				
SOL	IIa	2a	4av	none	11	36	17	15	67
SOL	IIa	2a	4ci	none	536	572	977	927	664
SOL	IIa	2a	4cii	none	55	175	456	388	293
SOL	IIa	2a	4ciii	none	21	35	59	170	31
SOL	IIa	2a	4civ	IIA81f	2	12			
SOL	IIa	2a	4civ	none	17	25	68	40	4
SOL	IIa	2a	4d	none	4	998	314	387	286
SOL	IIa	2a	4e	none	0	0	0	0	2
SOL	IIa	2a	none	none	1028	892	2836	2076	821

6.4.3. Trend in CPUE of cod, sole and plaice by derogation in management area 2b: Skagerrak, North Sea (incl. 2EU), and Eastern Channel

Catch rates of cod place and sole in g/KW-day are given in Tables 6.4.3.1-6.4.3.3. In some cases the figures refer only to landings, depending on whether discard data were available.

In the context of possible effort management measures, it is useful to summarise the impact of each gear category in terms of the relative quantity removed per unit of effort. Using this approach, the CPUE for a given gear, when compared with the CPUE of another gear for the same period, can be used as a proxy for the relative fishing power of the gear. The ten gear categories with the highest 2007 CPUE for cod, plaice and sole are indicated in Tables 6.4.3.4-6.4.3.6. These tables also indicate the mean CPUE over 2005-2007, and the relative position of each gear category if the ranking was base don this mean rather than the 2007 values.

For cod (Table 6.4.3.4), two gillnet mesh sizes, 4ciii and 4cii, are substantially more efficient at catching cod than any of the other gear categories. This is apparent even though the estimates of catch by these gears refer only to landings. However, it should be remembered that it is problematic to define effort for static gears, hence defining effort in terms of kilowatt-days may not adequately capture fishing activity by gillnetters. The ranking also indicates that longliners (4e) and trammel netters (4d) are also rather efficient at capturing cod, though again, the caveat about definition of effort for static gears also applies in these cases, and neither gear is used very much in the area. The rankings when based on the recent mean CPUE, are similar to those based on the 2007 data.

It should be noted that plaice and sole in the Skagerrak (regulated area 2b1) are considered as part of the same stocks as plaice and sole in the Kattegat (regulated area 2a). Both stocks are considered as being distinct from the North Sea stock, as are plaice and sole in the Eastern Channel (2b3). As a result, the CPUE data for these species need to be interpreted with care.

Compared to the data in the 2007 report of this group, there are some quite substantial differences in plaice CPUE in the data presented here. These have not been investigated in detail, but are though to result from the extensive revision of Dutch data since last year.

The most efficient gear for the capture of plaice (Table 6.4.3.5) is indicated to be large mesh beam trawlers (4biv and 4biii), closely followed by the gillnet category 4ciii, although otter trawl 4aiv fishing under specon IIA81C comes out as the most effective gear if the recent mean value is considered. In general however, the differences in mean catch rates between these different gear types are relatively small.

As with plaice, there are some quite substantial revisions in the CPUE data for sole compared to the data given in the 2007 report. Once again, this is thought to be due to the revision of Dutch data. The figures in Table 6.4.3.6 indicate that the most efficient gears for the capture of sole are generally beam trawls and trammel nets, followed by small mesh gillnets.

Table 6.4.3.1 North Sea, Skagerrak & Eastern Channel. Cod CPUE (g/(kW*days)) by gear category and year, 2003-2007.

SPECIES	ANNEX	REG AREA C	REG GEAR	SPECON	CPUE 2003	CPUE 2004	CPUE 2005	CPUE 2006	CPUE 2007
COD	IIa	2b	4ai	none	15	9	13	7	5
COD	IIa	2b	4aii	IIA81b			4	6	10
COD	IIa	2b	4aii	IIA81d	82	43	43	57	159
COD	IIa	2b	4aiv	IIA81c	64	58	132	65	61
COD	IIa	2b	4aiv	IIA81d	20	14	20	26	50
COD	IIa	2b	4aiv	IIA81k	18				
COD	IIa	2b	4aiv	none	170	289	418	200	382
COD	IIa	2b	4av	IIA81c	239	358	327	119	304
COD	IIa	2b	4av	IIA81d	277	275	321	349	504
COD	IIa	2b	4av	none	443	496	533	618	934
COD	IIa	2b	4ci	none	241	205	175	174	102
COD	IIa	2b	4cii	none	930	1589	1609	1610	1442
COD	IIa	2b	4ciii	none	1531	2543	2645	2581	4121
COD	IIa	2b	4civ	none	51	99	130	59	154
COD	IIa	2b	4d	none	495	182	317	478	512
COD	IIa	2b	4e	none	773	543	539	1020	704
COD	IIa	2b	none	none	42	43	44	47	31
COD	IIa	2b1	4aii	none	84	351	114	211	50
COD	IIa	2b1	4aiii	IIA81a				181	157
COD	IIa	2b1	4aiii	IIA81d	151	503	269	155	
COD	IIa	2b1	4aiii	IIA81l				209	
COD	IIa	2b1	4aiii	none	293	363	446	551	601
COD	IIa	2b1	4aiv	IIA81a				536	0
COD	IIa	2b1	4av	IIA81a				446	59
COD	IIa	2b1	4av	IIA81j				34	
COD	IIa	2b1	none	none	188	1887			
COD	IIa	2b12	4bi	none	80	73	66	69	58
COD	IIa	2b12	4bii	none	8	9	0	1	0
COD	IIa	2b12	4biii	IIA81c	15	8	7	9	9
COD	IIa	2b12	4biii	IIA81i	34	46	6	8	14
COD	IIa	2b12	4biii	none	5	5	11	6	19
COD	IIa	2b12	4biv	IIA81c	32	55	76	27	32
COD	IIa	2b12	4biv	IIA81e				1	
COD	IIa	2b12	4biv	IIA81i	43	69	28	34	47
COD	IIa	2b12	4biv	none	242	359	360	340	220
COD	IIa	2b12	4d	IIA81g	189	55	25	38	74
COD	IIa	2b2	4aii	IIA81c	84	80	73	97	99
COD	IIa	2b2	4aii	none	205	129	154	186	452
COD	IIa	2b2	4civ	IIA81f	238	90	115	97	
COD	IIa	2b23	4aiii	IIA81a				88	
COD	IIa	2b23	4aiii	IIA81d	86	46	91	182	553
COD	IIa	2b23	4aiii	none	146	120	151	157	173
COD	IIa	2b23	4aiv	IIA81a				31	
COD	IIa	2b23	4av	IIA81a				369	
COD	IIa	2b23	4av	IIA81j				0	
COD	IIa	2b23	none	none	0	0	0	0	0
COD	IIa	2b3	4aii	IIA81c	23	116	54	13	125
COD	IIa	2b3	4aii	none	120	72	85	87	129
COD	IIa	2b3	4bi	none	21	25	25	37	39
COD	IIa	2b3	4bii	none	0	4		0	45
COD	IIa	2b3	4biii	IIA81c					5
COD	IIa	2b3	4biii	IIA81i	2				
COD	IIa	2b3	4civ	IIA81f					52
COD	IIa	2b3	4d	IIA81g	142	43	31	47	76
COD	IIa	2b3	none	none	1	0	0	1	2

Table 6.4.3.2 North Sea, Skagerrak & Eastern Channel. Plaice CPUE (g/(kW*days)) by gear category and year, 2003-2007

ANNEX	REG AREA	REG GEAR	SPECON	CPUE 2003	CPUE 2004	CPUE 2005	CPUE 2006	CPUE 2007
IIa	2b	4ai	none	13	9	5	23	8
IIa	2b	4aii	IIA81b			50	24	82
IIa	2b	4aii	IIA81d	37	41	22	21	29
IIa	2b	4aiv	IIA81c	1597	2030	2113	2705	1448
IIa	2b	4aiv	IIA81d	2	1	2	1	4
IIa	2b	4aiv	IIA81k	77			427	
IIa	2b	4aiv	none	548	902	779	1862	1139
IIa	2b	4av	IIA81c	4415	2311	1202	53	54
IIa	2b	4av	IIA81d	197	191	140	115	42
IIa	2b	4av	IIA81h				5	
IIa	2b	4av	none	240	178	187	298	314
IIa	2b	4ci	none	258	193	211	115	107
IIa	2b	4cii	none	1143	1313	1213	1308	1512
IIa	2b	4ciii	none	2276	1662	1660	2096	1059
IIa	2b	4civ	none	23	16	27	8	49
IIa	2b	4d	none	511	576	275	263	249
IIa	2b	4e	none	7	50	7	21	1
IIa	2b	none	none	38	29	27	30	38
IIa	2b1	4aii	none	37	75	93	687	63
IIa	2b1	4aiii	IIA81a				90	140
IIa	2b1	4aiii	IIA81d	68	277	116	141	
IIa	2b1	4aiii	IIA81l				104	
IIa	2b1	4aiii	none	497	464	243	285	343
IIa	2b1	4aiv	IIA81a				3118	0
IIa	2b1	4av	IIA81a				2101	7
IIa	2b1	4av	IIA81j				142	
IIa	2b1	none	none	1519	1218			80
IIa	2b12	4bi	none	1724	1359	1150	1411	1202
IIa	2b12	4bii	none	273	409	83	435	65
IIa	2b12	4biii	IIA81c	1350	1446	1217	1307	1634
IIa	2b12	4biii	IIA81i	1241	1367	1366	1456	1853
IIa	2b12	4biii	none	145	568	574	806	1631
IIa	2b12	4biv	IIA81c	1293	1210	1282	1590	2038
IIa	2b12	4biv	IIA81e	2528			1707	
IIa	2b12	4biv	IIA81i	1404	1524	1509	1595	1968
IIa	2b12	4biv	none	1236	1048	862	1375	1486
IIa	2b12	4d	IIA81g	215	161	154	93	83
IIa	2b2	4aii	IIA81c	1314	808	804	1029	1121
IIa	2b2	4aii	none	320	202	142	224	130
IIa	2b2	4civ	IIA81f	82	92	114	113	
IIa	2b2	none	none	1		4		
IIa	2b23	4aiii	IIA81a				2800	
IIa	2b23	4aiii	IIA81d	49	37	39	68	71
IIa	2b23	4aiii	none	1143	825	731	479	254
IIa	2b23	4aiv	IIA81a				2899	
IIa	2b23	4av	IIA81a				144	
IIa	2b23	none	none	23	21	19	10	11
IIa	2b3	4aii	IIA81c	489	224	185	333	436
IIa	2b3	4aii	none	298	378	155	122	106
IIa	2b3	4bi	none	544	663	611	545	638
IIa	2b3	4bii	none	957	1531	754	560	22
IIa	2b3	4biii	IIA81c			107		425
IIa	2b3	4biii	IIA81i	41				
IIa	2b3	4civ	IIA81f		12			52
IIa	2b3	4d	IIA81g	173	196	118	120	175
IIa	2b3	none	none	34	42	165	183	62

Table 6.4.3.3 North Sea, Skagerrak & Eastern Channel. Sole CPUE (g/(kW*days)) by gear category and year, 2003-2007

SPECIES	ANNEX	REG AREA C	REG GEAR	SPECON	CPUE 2003	CPUE 2004	CPUE 2005	CPUE 2006	CPUE 2007
SOL	IIa	2b	4ai	none	1	1	2	1	1
SOL	IIa	2b	4aii	IIA81b		2	3	2	5
SOL	IIa	2b	4aii	IIA81d	1	2	2	3	6
SOL	IIa	2b	4aiv	IIA81c	4	10	2	2	1
SOL	IIa	2b	4aiv	IIA81d	0	0	0	0	0
SOL	IIa	2b	4aiv	IIA81k	6				
SOL	IIa	2b	4aiv	none	3	9	6	8	1
SOL	IIa	2b	4av	IIA81c	10	17	3	33	0
SOL	IIa	2b	4av	IIA81d	2	2	1	0	1
SOL	IIa	2b	4av	none	1	1	0	2	0
SOL	IIa	2b	4ci	none	579	496	542	661	830
SOL	IIa	2b	4cii	none	42	63	163	60	125
SOL	IIa	2b	4ciii	none	13	27	75	24	35
SOL	IIa	2b	4civ	none	0	1	1	1	3
SOL	IIa	2b	4d	none	349	164	247	153	142
SOL	IIa	2b	4e	none	0	0	0	0	0
SOL	IIa	2b	none	none	21	15	8	6	12
SOL	IIa	2b1	4aii	none	8	4	2	10	
SOL	IIa	2b1	4aiii	IIA81a				12	2
SOL	IIa	2b1	4aiii	IIA81d	1	59	8	3	
SOL	IIa	2b1	4aiii	IIA81l				7	
SOL	IIa	2b1	4aiii	none	6	7	11	21	2
SOL	IIa	2b1	4aiv	IIA81a				24	0
SOL	IIa	2b1	4av	IIA81a				1	0
SOL	IIa	2b1	4av	IIA81j				18	
SOL	IIa	2b1	none	none	130				
SOL	IIa	2b12	4bi	none	416	429	341	312	352
SOL	IIa	2b12	4bii	none	115	42	59	7	2
SOL	IIa	2b12	4biii	IIA81c	18	12	15	13	18
SOL	IIa	2b12	4biii	IIA81i	38	38	17	8	9
SOL	IIa	2b12	4biii	none	1	6	5	5	4
SOL	IIa	2b12	4biv	IIA81c	17	14	11	9	3
SOL	IIa	2b12	4biv	IIA81e	9			1	
SOL	IIa	2b12	4biv	IIA81i	19	4	6	7	4
SOL	IIa	2b12	4biv	none	12	8	5	8	5
SOL	IIa	2b12	4d	IIA81g	1265	1112	1248	719	654
SOL	IIa	2b2	4aii	IIA81c	28	48	25	74	185
SOL	IIa	2b2	4aii	none	11	7	4	3	6
SOL	IIa	2b2	4civ	IIA81f	0	0	2	1	
SOL	IIa	2b23	4aiii	IIA81a				4	
SOL	IIa	2b23	4aiii	IIA81d	3	3	2	3	2
SOL	IIa	2b23	4aiii	none	14	21	9	7	4
SOL	IIa	2b23	none	none	9	11	7	2	2
SOL	IIa	2b3	4aii	IIA81c	192	59	38	90	118
SOL	IIa	2b3	4aii	none	84	68	59	86	96
SOL	IIa	2b3	4bi	none	761	851	722	680	656
SOL	IIa	2b3	4bii	none	1244	1598	1077	423	40
SOL	IIa	2b3	4biii	IIA81c			1129		142
SOL	IIa	2b3	4biii	IIA81i	332				
SOL	IIa	2b3	4d	IIA81g	884	683	752	797	854
SOL	IIa	2b3	none	none	22	46	127	126	53

Table 6.4.3.4, North Sea, Skagerrak & Eastern Channel cod. Top ten gear categories when ranked by highest catch-rates in 2007. The corresponding rank based on the mean CPUE over 2005-2007 is also indicated.

rank	Gear	Specon	area	CPUE 2007	Mean CPUE 2005 - 2007	rank 05-07
1	4ciii	none	2b	4121	3115.7	1
2	4cii	none	2b	1442	1553.7	2
3	4av	none	2b	934	695.0	4
4	4e	none	2b	704	754.3	3
5	4aiii	none	2b1	601	532.7	5
6	4aiii	IIA81d	2b23	553	275.3	10
7	4d	none	2b	512	435.7	6
8	4av	IIA81d	2b	504	391.3	7
9	4aii	none	2b2	452	264.0	11
10	4aiv	none	2b	382	333.3	8

Table 6.4.3.5, North Sea, Skagerrak & Eastern Channel plaice. Top ten gear categories when ranked by highest catch-rates in 2007. The corresponding rank based on the mean CPUE over 2005-2007 is also indicated.

rank	Gear	Specon	area	CPUE 2007	Mean CPUE 2005 - 2007	rank 05-07
1	4biv	IIA81c	2b12	2038	1636.7	3
2	4biv	IIA81i	2b12	1968	1690.7	2
3	4biii	IIA81i	2b12	1853	1558.3	5
4	4biii	IIA81c	2b12	1634	1386.0	6
5	4biii	none	2b12	1631	1003.7	11
6	4cii	none	2b	1512	1344.3	7
7	4biv	none	2b12	1486	1241.0	10
8	4aiv	IIA81c	2b	1448	2088.7	1
9	4bi	none	2b12	1202	1254.3	9
10	4aiv	none	2b	1139	1260.0	8

Table 6.4.3.6, North Sea, Skagerrak & Eastern Channel sole. Top ten gear categories when ranked by highest catch-rates in 2007. The corresponding rank based on the mean CPUE over 2005-2007 is also indicated.

rank	Gear	Specon	area	CPUE 2007	Mean CPUE 2005 - 2007	rank 05-07
1	4d	IIA81g	2b3	854	801.0	2
2	4ci	none	2b	830	677.7	4
3	4bi	none	2b3	656	686.0	3
4	4d	IIA81g	2b12	654	873.7	1
5	4bi	none	2b12	352	335.0	7
6	4aii	IIA81c	2b2	185	94.7	11
7	4d	none	2b	142	180.7	8
7	4biii	IIA81c	2b3	142	635.5	5
9	4cii	none	2b	125	116.0	9
10	4aii	IIA81c	2b3	118	82.0	12

6.4.4. Trend in CPUE of cod, sole and plaice by derogation in management area 2c: Irish Sea

Time series of discard data is available for a limited number of gear-special condition combinations. Cod discard data is available primarily for 4a.ii IIA.8.d, 4a.iv IIA.8.d and 4b.i. Plaice discard data for 4a.ii IIA.8.c, 4a.ii IIA.8.d, 4a.ii none and 4b.i. Sole discard data is limited to 4b.i. Thus only these categories can be considered as CPUE where both landings and discards are available, the remainder must be considered as LPUE (landings per unit effort). The units used are grams per kW days-at-sea (g/kW*days)

Only the gears with relatively high effort and/or landings in the Irish Sea will be discussed here, as these are able to provide the most representative figures. Gear mesh combinations with little effort, and static gears where the use of kW*days-at-sea as an appropriate indication of effort is debatable, may have unrepresentative values and are not discussed. Values for cod, plaice, and sole are detailed below (table 6.4.4.1, 6.4.4.2, and 6.4.4.3 respectively)

The most important cod landings and effort allocations are within demersal trawl and seine categories, in addition to the beam trawl category 4b.i in relation to effort. Overall, there appears to be higher CPUE and LPUE values in 2007 than those during 2007 (Table 6.4.4.1 and Figure 6.4.4.1). 4a.iv IIA.8.d which represents CPUE have the highest weights of those gear categories with important effort allocation and cod landings. Cod values are higher for the larger mesh trawl and seine categories than smaller meshes, likely related to decreased *Nephrops* targeting within these larger mesh categories. This is demonstrated by the lower CPUE values (both landings and discards available 2003-2007) of the smaller mesh equivalent 4a.ii IIA.8.d. CPUE is also available for the beam trawl category 4b.i, this category contains lower weights than those of the two trawl categories containing both landings and discards. As a note, values for cod are highest within the gillnet gear categories, however these categories should not be considered as certain given the low level of landings, and the uncertainty of effort.

In relation to plaice, there are a number of different gear categories with similar weights obtained. Several of the higher rates occur within demersal trawl and seine special condition IIA.8.c higher within 4a.iv. This however represents LPUE, whilst 4a.ii shows CPUE (excl. 2003). For important gears in relation to landings, 4a.ii categories have relatively low CPUEs (discards available excl. 2003). Relative consistency is seen in special condition IIA.8.d and none where the majority of landings occur (Figure 6.4.4.2). The beam trawl category 4b.i however has high CPUE (excl. 2003) (Table 6.4.4.2). This group has been in continual decline since 2004, where in 2007 obtainable values (~300g/kW Days) are 41% lower than those in 2004 (~500g/kW Days) (Figure 6.4.4.2).

Only one gear category has high values for sole, this is in terms of CPUE. This is the beam trawl category 4.b.i (80-89mm). CPUE of sole was highest in 2005, since when CPUE has declined to lowest levels (Figure6.4.4.3). With the exception of other beam trawl mesh categories, currently unused or only at very low levels, all other gear categories with/without special conditions demonstrate far lower LPUEs, <25 g/kW Days (Table 6.4.4.3).

Table 6.4.4.1 Irish Sea. Cod CPUE (g/(kW*days)) by derogation and year, 2003-2007.

SPECIES	ANNEX	REG AREA	REG GEAR	SPECON	CPUE 2003	CPUE 2004	CPUE 2005	CPUE 2006	CPUE 2007
COD	IIa	2c	4aii	IIA81c	49	63	76	83	51
COD	IIa	2c	4aii	IIA81d	54	93	85	62	175
COD	IIa	2c	4aii	none	124	140	96	74	114
COD	IIa	2c	4aiii	IIA81d	26	50	36	10	37
COD	IIa	2c	4aiii	none	64	55	44	60	220
COD	IIa	2c	4aiv	IIA81c	83	266	156	21	23
COD	IIa	2c	4aiv	IIA81d	130	311	361	505	710
COD	IIa	2c	4aiv	IIA81k	5	5			
COD	IIa	2c	4aiv	none	199	253	248	334	563
COD	IIa	2c	4av	IIA81c	12			40	
COD	IIa	2c	4av	IIA81d	83	27			
COD	IIa	2c	4av	none	141	114	191	3163	301
COD	IIa	2c	4bi	none	104	95	97	62	105
COD	IIa	2c	4bii	none	106	28	38		124
COD	IIa	2c	4biii	none	62	37	60		
COD	IIa	2c	4ci	none	2162		1896	26	215
COD	IIa	2c	4cii	none	232	769	322	724	2449
COD	IIa	2c	4ciii	none	896	2872	538	4293	9499
COD	IIa	2c	4civ	none			1		
COD	IIa	2c	4e	none	31	20	22	151	290
COD	IIa	2c	none	none	4	20	1	3	6

Table 6.4.4.2 Irish Sea. Plaice CPUE (g/(kW*days)) by derogation and year, 2003-2007.

SPECIES	ANNEX	REG AREA	REG GEAR	SPECON	CPUE 2003	CPUE 2004	CPUE 2005	CPUE 2006	CPUE 2007
PLE	IIa	2c	4ai	none				12	
PLE	IIa	2c	4aii	IIA81c	94	129	118	144	186
PLE	IIa	2c	4aii	IIA81d	19	16	27	23	36
PLE	IIa	2c	4aii	none	93	83	84	74	72
PLE	IIa	2c	4aiii	IIA81d	32	743	735	525	121
PLE	IIa	2c	4aiii	none	16	570	652	396	287
PLE	IIa	2c	4aiv	IIA81c	130	156	297	1141	575
PLE	IIa	2c	4aiv	IIA81d	38	40	48	51	19
PLE	IIa	2c	4aiv	IIA81k	207	112			
PLE	IIa	2c	4aiv	none	148	69	44	46	112
PLE	IIa	2c	4av	IIA81c	472	633	778	783	188
PLE	IIa	2c	4av	IIA81d	425	484			3748
PLE	IIa	2c	4av	none	312	162	66	26	121
PLE	IIa	2c	4bi	none	387	508	485	415	298
PLE	IIa	2c	4bii	none	225	342	199		177
PLE	IIa	2c	4biii	none	79	87	9		
PLE	IIa	2c	4ci	none			63		
PLE	IIa	2c	none	none	5	20	14	9	11

Table 6.4.4.3 Irish Sea. Sole CPUE (g/(kW*days)) by derogation and year, 2003-2007.

SPECIES	ANNEX	REG AREA	REG GEAR	SPECON	CPUE 2003	CPUE 2004	CPUE 2005	CPUE 2006	CPUE 2007
SOL	IIa	2c	4aii	IIA81c	7	7	10	13	14
SOL	IIa	2c	4aii	IIA81d	2	3	3	3	4
SOL	IIa	2c	4aii	none	11	7	7	7	14
SOL	IIa	2c	4aiii	IIA81d	1	17	12	9	12
SOL	IIa	2c	4aiii	none	1	13	15	16	8
SOL	IIa	2c	4aiv	IIA81c	5	5	1	1	1
SOL	IIa	2c	4aiv	IIA81d	2	1	1	1	0
SOL	IIa	2c	4aiv	IIA81k	10	13			
SOL	IIa	2c	4aiv	none	5	4	7	3	9
SOL	IIa	2c	4av	IIA81c	23	4		3	
SOL	IIa	2c	4av	IIA81d	12	16			
SOL	IIa	2c	4av	none	20	8	16	1	
SOL	IIa	2c	4bi	none	380	386	424	366	315
SOL	IIa	2c	4bii	none	65	50	63		85
SOL	IIa	2c	4biii	none	54	54	68		
SOL	IIa	2c	4ciii	none					8
SOL	IIa	2c	4civ	none		1			
SOL	IIa	2c	none	none	3	6	5	8	14

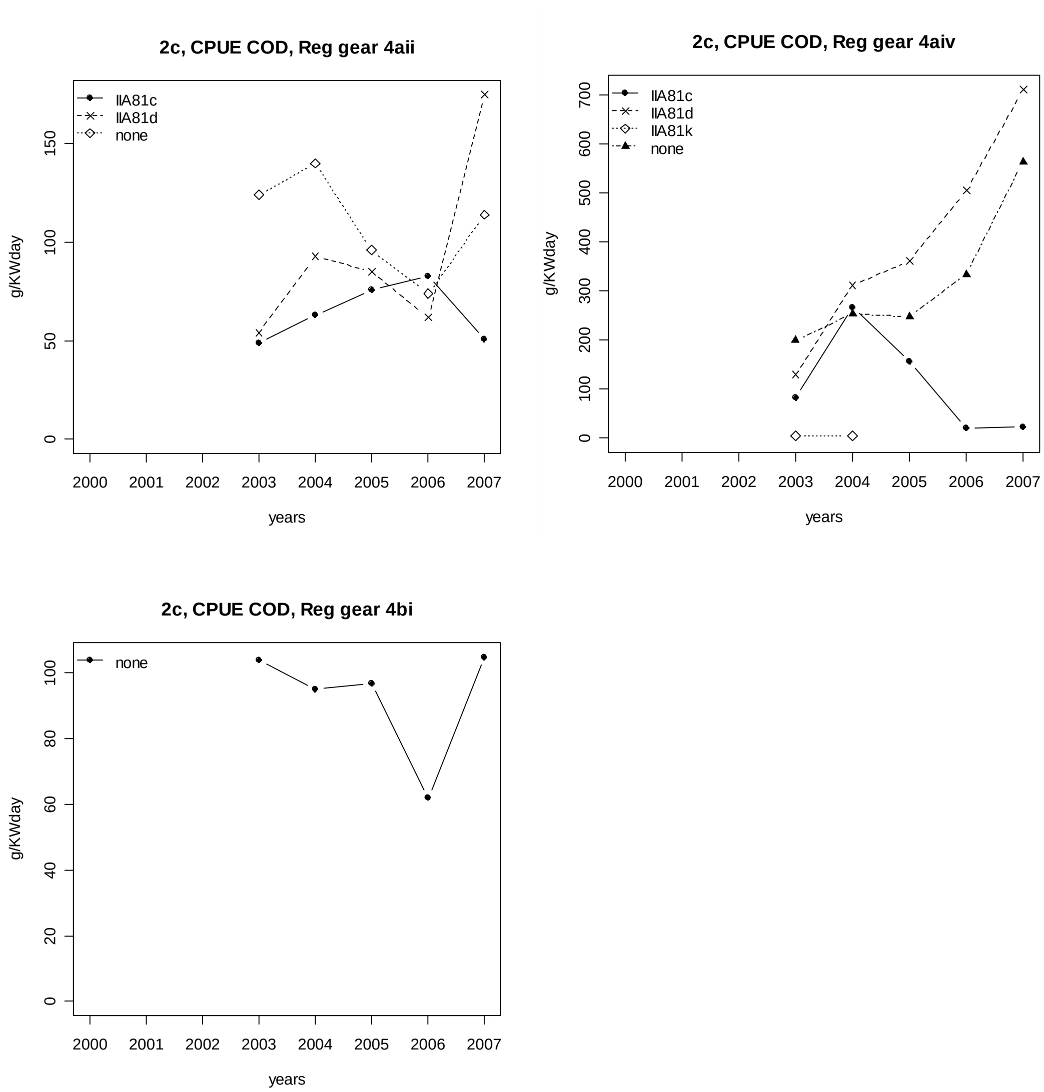


Figure 6.4.4.1. Irish Sea. Trends in cod CPUE (g/kW*days) by major derogations, 2003-2007. Note, full time series discards only available for 4a.ii IIA.8.d and 4a.iv IIA.8.d, 2004-2007 available for 4b.i.

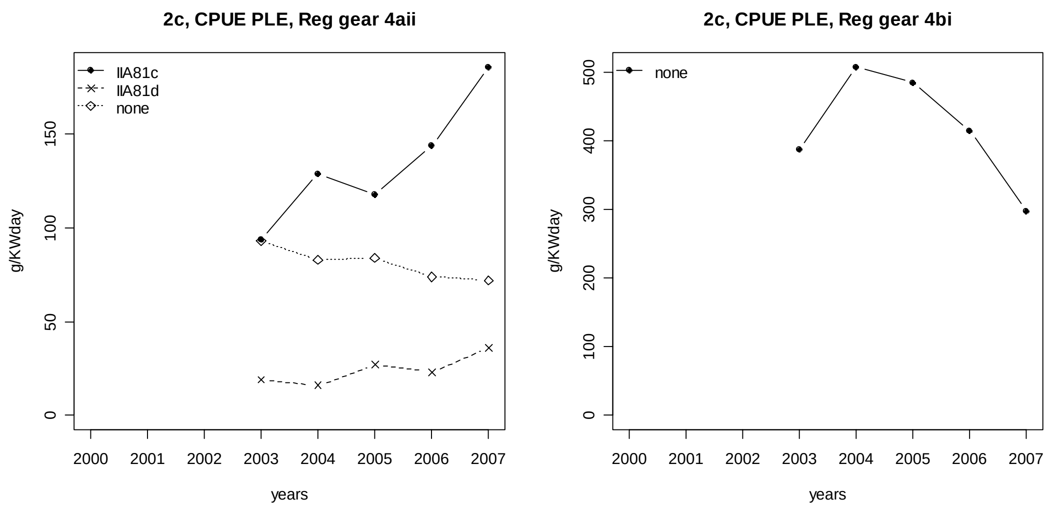


Figure 6.4.4.2. Irish Sea. Trends in plaice CPUE (g/kW*days) by major derogations, 2003-2007. Note, 2003-2006 discards only available for 4a.ii IIA8.c, 4a.ii IIA.8.d, 4a.ii none and 4b.i.

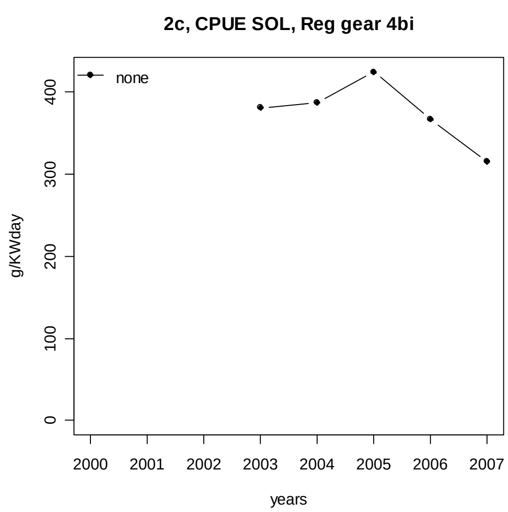


Figure 6.4.4.3. Irish Sea. Trends in sole CPUE (g/kW*days) by the major derogation, 2003-2007. Note, discards only available 2003-2006.

6.4.5. Trend in CPUE of cod by derogation in management area 2d: West of Scotland

Section 6.3.5 shows how catch of plaice and sole are negligible in the west of Scotland waters and therefore this section only considers CPUE of cod. Table 6.4.5.1 shows cod catch per unit effort (CPUE), recorded in g/kWdays for all derogations. Furthermore, this section concentrates on the demersal trawl and seine gears (gear 4a) as sections 6.2.5 and 6.3.5 demonstrate the negligible importance of beam, static and longline gears in the west of Scotland waters in terms of both effort and catch of cod.

Figures 6.4.5.1 to 6.4.5.4 show the CPUE for each derogation within a given mesh size category of the 4a gear. For all mesh sizes, it can be seen that vessels entitled to a derogation based on a low percentage of cod catch in 2002 have a CPUE of cod consistently below that of vessels not entitled to the derogation. The high CPUE for 4.a.iv IIA81c in 2005 is considered an artefact of division using small numbers. Effort for this derogation is small (approximately 1% of the effort recorded for 4.a.iv IIA81d and 4.a.iv none) and from Table 6.3.5.1 cod landings for this derogation are 1 tonne or less.

Figure 6.4.5.5 compares the cod CPUE for 4.a gear (demersal trawl and seine) of all mesh size ranges where vessels are not qualified for special condition status. As would be expected the cod CPUE is higher for the 4.a.v (≥120mm) gear. Between 2003 and 2006 the temporal pattern of CPUE is consistent across mesh size ranges. In 2007 CPUE has increased significantly for the two largest mesh sizes. This is consistent with the VIa cod assessment conducted by ICES that indicates a strong 2005 year class of cod.

Figure 6.4.5.6 shows the CPUE for long lines (section 6.2.5 shows effort for this category to be increasing in area 2d). There is no discernable trend in cod CPUE for this gear type.

Table 6.4.5.1 West of Scotland. Cod CPUE (g/(kW*days)) by derogation and year, 2003-2007.

SPECIES	ANNEX	REG AREA	REG GEAR	SPECON	CPUE 2003	CPUE 2004	CPUE 2005	CPUE 2006	CPUE 2007
COD	IIa	2d	4aii	IIA81c	17	20	19	15	15
COD	IIa	2d	4aii	IIA81d	23	13	7	18	25
COD	IIa	2d	4aii	none	91	47	44	127	109
COD	IIa	2d	4aiii	IIA81d	2008	1425	803	428	1804
COD	IIa	2d	4aiii	none	24	7	5	15	39
COD	IIa	2d	4aiv	IIA81c	59	65	155	34	239
COD	IIa	2d	4aiv	IIA81d	18	21	18	38	43
COD	IIa	2d	4aiv	none	89	51	55	103	446
COD	IIa	2d	4av	IIA81c					97
COD	IIa	2d	4av	IIA81d	64	72	87	250	125
COD	IIa	2d	4av	none	163	98	135	333	542
COD	IIa	2d	4biv	none	26	42	5	8	
COD	IIa	2d	4ci	none					11
COD	IIa	2d	4cii	none	178	41	137	202	78
COD	IIa	2d	4ciii	none	1	524			
COD	IIa	2d	4civ	none				1	
COD	IIa	2d	4e	none	12	8	9	18	6
COD	IIa	2d	none	none				3	

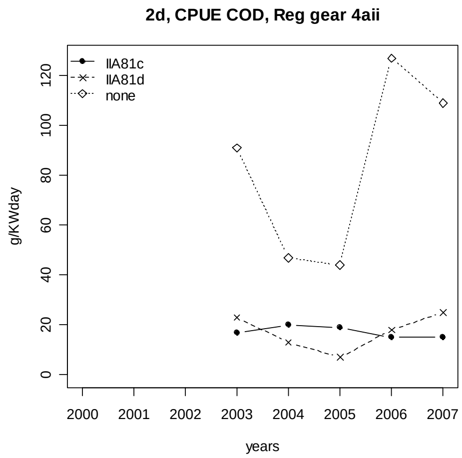


Figure 6.4.5.1 West of Scotland. Cod CPUE for the gear 4.a.ii (demersal trawl and seine 70-89mm).

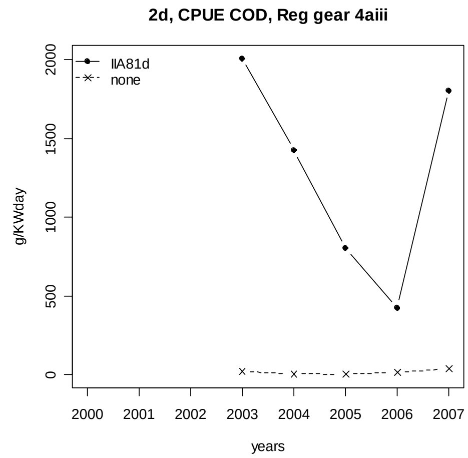


Figure 6.4.5.2 West of Scotland. Cod CPUE for the gear 4.a.iii (demersal trawl and seine 90-99mm).

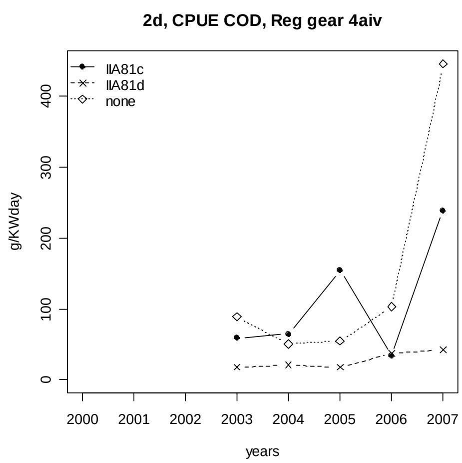


Figure 6.4.5.3 West of Scotland. Cod CPUE for the gear 4.a.iv (demersal trawl and seine 100-119mm).

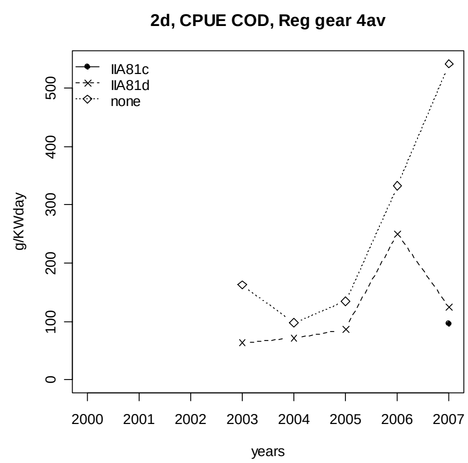


Figure 6.4.5.4 West of Scotland. Cod CPUE for the gear 4.a.v (demersal trawl and seine ≥120mm).

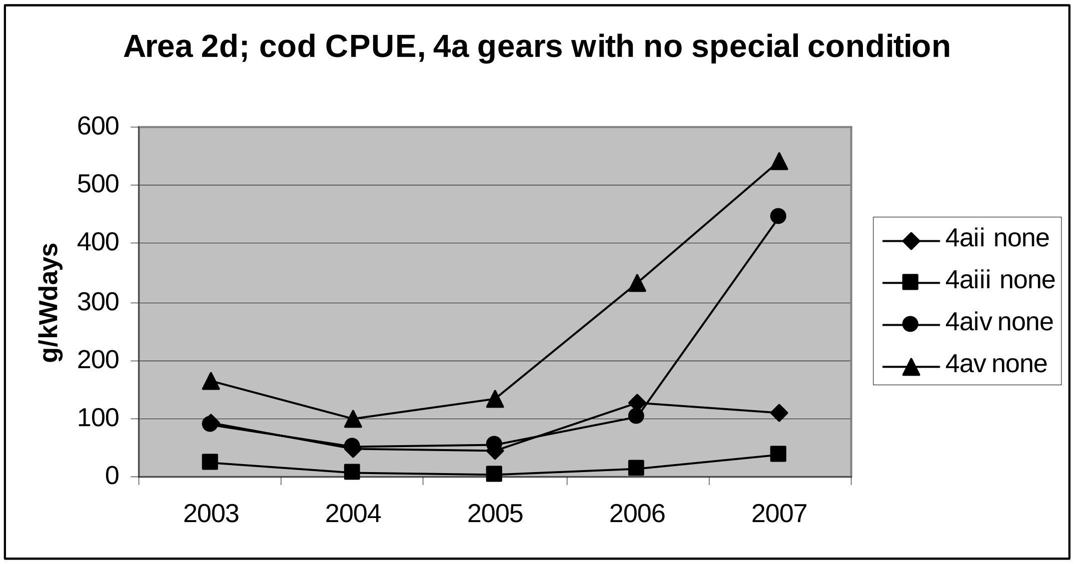


Figure 6.4.5.5 West of Scotland. Cod CPUE for 4.a gear (demersal trawl and seine) of all mesh size ranges where vessels are not qualified for special condition status.

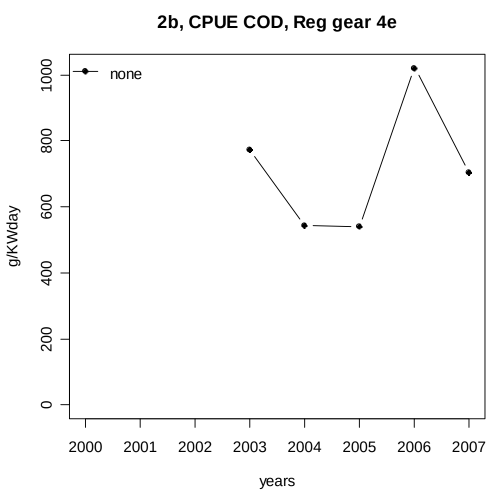


Figure 6.4.5.6 West of Scotland. Cod CPUE for the gear 4.e (long lines).

6.5. Ranked derogations according to relative contributions to cod, sole and plaice catches

STECF-SGRST presents the ranked contributions of the individual derogations pertaining to Annex IIA of Coun. Reg. 40/2008 to cod, plaice and sole catches for the years 2003 to 2007 in order to allow the evaluation of annual variation.

The catch estimates are based on the sums of the landings and discards where available. STECF-SGRST considers the catch estimates as uncertain where derogations lack discard estimates or they are poorly sampled. The ranking according to catch in numbers only considers derogations for which catch in numbers are available!

6.5.1. Ranked derogations according to cod, sole and plaice catches in management area 2a: Kattegat

This section presents information which lacks Danish discard data and furthermore Danish data of landings in 2007 were not given by special condition. Sweden provided discard data for gear category 4a.iii (90 mm trawl) from 2003-2007 and for 4a.iii special condition IIA81a (120mm square mesh window) as well as 4a.ii special condition IIA83b (sorting grid) for 2007.

The following table lists the landings for the main species by gear category

Table 6.5.1.1: Landing of Cod, Nephrops, Plaice and sole in Kattegatt by gear category presented as % of total 2007 and % of average landings 2003-2007.

	COD		NEP		PLE		SOL	
Gear group	% 2003-2007	% of 2007	% 2003-2007	% of 2007	% 2003-2007	% of 2007	% 2003-2007	% of 2007
ai	0,8	1,1	0,16	0	0,1	0	0	0
aii	0,1	2,3	11,62	5,8	1,3	0,1	4,6	0,2
aiii	**75,1**	**73,9**	**86,76**	**91,3**	**50,6**	**44,9**	**47,2**	**58**
aiv	6,1	5,5	0,35	0,6	22,9	29,9	1,9	1,8
av	5,5	2,5	0,29	1,1	2	1,1	0,4	0,5
ci	1,5	1	0,01	0	1,7	1,2	13	13,3
cii	3,3	3,2	0,01	0	5,8	7	5,9	6,9
ciii	0,8	0,7	0	0	0,3	0,2	0,2	0,1
civ	0	0,1	0	0	0,1	0,1	0,2	0
4d	0	0	0,01	0	0,1	0	0,1	0,1
4e	0,1	0,2	0	0	0	0	0	0
none	6,7	9,6	0,79	1,2	15,1	15,4	**26,5**	**19**

Amongst the gear groups 90 mm trawl (4a.iii) takes the largest share of the landings 73 % of the cod landings, 91 % of the Nephrops landing, 50 % of the Plaice landings and 58 %

of the landings of Sole 2007. The gear group 4a.iv (>100-<120mm) are responsible for a large share of the landings of Plaice, 30% but a limited amount of the landings of the other species. The unspecified group (none) are responsible for 19 % of the sole landings. The none group is exclusively a fact of the inclusion of vessels less than 10 m in the Danish catch data base.

The absence of discard data from the Danish fisheries makes it impossible to estimate discard - and catch rates from the entire Kattegat fisheries. Due to differences in national management systems as well as differences in fishing patterns it is not possible to consider the Swedish discard data representative for the Danish fishery. In Sweden the fishery is managed by weekly rations while Denmark in 2007 introduced individual vessel quotas. The fisheries in Sweden is also characterised by long periods of prohibition to land different species, particularly cod (for example in 2006 the cod fishery in Kattegatt were closed for 8 months). The different management regimes have implications on the discard patterns of fish, particularly fish discarded for quota reasons which for cod is an important problem in the Kattegat.

The following tables Table 6.5.1.2 and 6.5.1.3 shows the different derogations ranked according to CPUE of Cod, plaice and Sole are not representative since Swedish discard ratios, which could not be considered representative for the Danish fisheries, have been used to estimate Danish discards due to absence of Danish discard data in 2007. Further note that the Danish landings data for 2007 are only available by gear categories and not by special condition. Absence of this detailed data makes impact assessment of different special conditions on fishing mortality impossible

Table 6.5.1.2 ranked derogations according to relative cod, plaice and sole catches in weight (t) in area 2a 2003-2007. Ranking is according to year 2007.

SPECIES	REG_AREA	REG_GEAR	SPECON	2003	2004	2005	2006	2007
COD	2a	4aiii	none	0,68	0,88	0,81	0,81	0,85
COD	2a	4aiii	IIA81a				0,04	0,06
COD	2a	4av	none	0,03	0,01	0,01	0,01	0,02
COD	2a	none	none	0,09	0,05	0,08	0,06	0,02
COD	2a	4aiv	none	0,03	0,02	0,05	0,01	0,02
COD	2a	4cii	none	0,03	0,01	0,02	0,03	0,01
COD	2a	4ai	none	0,02		0,01		
COD	2a	4e	none					
COD	2a	4ciii	none	0,02				
COD	2a	4ci	none			0,01	0,01	
COD	2a	4av	IIA81a					
COD	2a	4aii	IIA81b					
COD	2a	4aiv	IIA81a				0,01	
COD	2a	4civ	none					
COD	2a	4aii	IIA81d					
COD	2a	4av	IIA81c					
COD	2a	4aii	none	0,08	0,01			
COD	2a	4aiv	IIA81d					
COD	2a	4aiii	IIA81d	0,01				
COD	2a	4aiii	IIa81l				0,01	
COD	2a	4aiv	IIA81c	0,01	0,01	0,02		
PLE	2a	4aiii	none	0,69	0,6	0,52	0,52	0,7
PLE	2a	4aiv	none	0,03	0,05	0,07	0,13	0,12
PLE	2a	4aiii	IIA81a				0,04	0,07
PLE	2a	none	none	0,1	0,14	0,13	0,12	0,06
PLE	2a	4cii	none	0,03	0,05	0,04	0,05	0,03
PLE	2a	4aii	IIA81b					0,01
PLE	2a	4aiv	IIA81a				0,07	
PLE	2a	4aii	none	0,04	0,01			
PLE	2a	4civ	none					
PLE	2a	4d	none					
PLE	2a	4ciii	none		0,01			
PLE	2a	4ci	none	0,01	0,01	0,02	0,02	
PLE	2a	4av	none	0,03	0,02	0,01	0,01	
PLE	2a	4av	IIA81a				0,01	
PLE	2a	4aii	IIA81d					
PLE	2a	4ai	none					
PLE	2a	4aiii	IIA81d	0,03	0,01			
PLE	2a	4aiii	IIa81l				0,01	
PLE	2a	4aiv	IIA81d					
PLE	2a	4av	IIA81c					
PLE	2a	4aiv	IIA81c	0,03	0,11	0,2	0,02	
SOL	2a	4aiii	none	0,46	0,77	0,43	0,4	0,61

Table 6.5.1.2 continued.

SOL	2a	none	none	0,22	0,14	0,32	0,27	0,17
SOL	2a	4ci	none	0,08	0,04	0,17	0,16	0,12
SOL	2a	4cii	none	0,05	0,02	0,05	0,06	0,06
SOL	2a	4aiii	IIA81a				0,06	0,02
SOL	2a	4aiv	none	0,01		0,01	0,02	0,02
SOL	2a	4aii	IIA81b					
SOL	2a	4av	none					
SOL	2a	4ciii	none					
SOL	2a	4civ	none					
SOL	2a	4d	none					
SOL	2a	4aiv	IIA81c					
SOL	2a	4aiv	IIA81a				0,01	
SOL	2a	4aiii	IIa81l				0,02	
SOL	2a	4aiii	IIA81d					
SOL	2a	4aii	IIA81d					
SOL	2a	4aii	none	0,15	0,02			

Table 6.5.1.3 ranked derogations according to relative cod, plaice and sole catches in numbers ('000) (t) in area 2a 2003-2007. Ranking is according to year 2007.

SPECIES	REG_AREA	REG_GEAR	SPECON	2003	2004	2005	2006	2007
COD	2b	4av	none	0,44	0,39	0,4	0,36	0,36
COD	2b2	4aii	none	0,13	0,07	0,09	0,14	0,21
COD	2b	4aii	IIA81d	0,07	0,04	0,04	0,06	0,09
COD	2b1	4aiii	none	0,04	0,14	0,12	0,12	0,09
COD	2b12	4bi	none	0,09	0,11	0,11	0,11	0,07
COD	2b3	4aii	none				0,03	0,03
COD	2b23	4aiii	none	0,03	0,03	0,02	0,03	0,03
COD	2b	4aiv	none	0,01	0,02	0,03	0,02	0,02
COD	2b	4ciii	none	0,04	0,05	0,04	0,03	0,02
COD	2b23	4aiii	IIA81d				0,01	0,01
COD	2b12	4biv	none	0,02	0,02	0,02	0,01	0,01
COD	2b	none	none	0,04	0,03	0,04	0,02	0,01
COD	2b	4cii	none	0,03	0,03	0,04	0,03	0,01
COD	2b	4av	IIA81d	0,02	0,02	0,01	0,01	0,01
COD	2b2	4aii	IIA81c	0,01				
COD	2b	4ai	none					
COD	2b3	4bi	none					
COD	2b	4civ	none					
COD	2b	4aiv	IIA81c					
COD	2b	4aiv	IIA81d					
COD	2b	4av	IIA81c					
COD	2b12	4biii	none					
COD	2b	4e	none	0,01				
COD	2b	4ci	none					
COD	2b1	4aii	none	0,01	0,03			
COD	2b	4d	none					
COD	2b12	4biv	IIA81e					
COD	2b2	4civ	IIA81f					
COD	2b3	4aii	IIA81c					
COD	2b1	4av	IIA81a					
COD	2b1	4aiii	IIA81a					
COD	2b	4aii	IIA81b					
COD	2b23	4av	IIA81a					
COD	2b12	4biv	IIA81i					
COD	2b1	4aiii	IIA81d					
COD	2b12	4biv	IIA81c					
COD	2b12	4biii	IIA81i					
COD	2b12	4biii	IIA81c					
COD	2b12	4bii	none					
COD	2b1	4aiv	IIA81a					
COD	2b1	none	none					
COD	2b1	4av	IIA81j					
COD	2b1	4aiii	IIa81l					
PLE	2b12	4bi	none	0,8	0,81	0,83	0,84	0,81
PLE	2b	4av	none	0,04	0,02	0,03	0,04	0,05
PLE	2b	4aiv	none	0,01	0,01	0,01	0,01	0,03
PLE	2b12	4biv	none	0,01	0,02	0,02	0,03	0,03
PLE	2b1	4aiii	none	0,01	0,03	0,02	0,01	0,02
PLE	2b12	4biii	none			0,01	0,01	0,01
PLE	2b	4cii	none	0,01	0,01	0,01	0,01	0,01
PLE	2b	none	none	0,01	0,01	0,01		0,01
PLE	2b2	4aii	none	0,01		0,01	0,01	0,01
PLE	2b23	4aiii	none	0,02	0,02	0,01	0,01	0,01
PLE	2b3	4bi	none	0,01	0,01	0,01	0,01	0,01

Table 6.5.1.3 continued

PLE	2b1	4aii	none					
PLE	2b	4e	none					
PLE	2b	4ci	none					
PLE	2b	4civ	none					
PLE	2b	4d	none					
PLE	2b1	none	none					
PLE	2b	4aii	IIA81d					
PLE	2b	4ai	none					
PLE	2b3	4aii	none	0,01	0,01			
PLE	2b3	4d	IIA81g					
PLE	2b	4ciii	none	0,01	0,01	0,01	0,01	
PLE	2b3	4aii	IIA81c					
PLE	2b	4av	IIA81c	0,01				
PLE	2b	4av	IIA81d					
PLE	2b	4av	IIA81h					
PLE	2b	4aiv	IIA81d					
PLE	2b	4aiv	IIA81c	0,01	0,01	0,01		
PLE	2b	4aii	IIA81b					
PLE	2b23	4aiii	IIA81d					
PLE	2b1	4aiii	IIA81d					
PLE	2b1	4aiii	IIA81a					
PLE	2b23	4aiv	IIA81a					
PLE	2b2	4civ	IIA81f					
PLE	2b2	4aii	IIA81c	0,01	0,01		0,01	
PLE	2b12	4biv	IIA81i					
PLE	2b12	4biv	IIA81e					
PLE	2b12	4biv	IIA81c	0,02	0,02	0,02		
PLE	2b12	4biii	IIA81i					
PLE	2b12	4biii	IIA81c	0,01				
PLE	2b12	4bii	none					
PLE	2b1	4av	IIA81j					
PLE	2b1	4av	IIA81a					
PLE	2b1	4aiii	IIa81l					
PLE	2b1	4aiv	IIA81a					
SOL	2b12	4bi	none	0,87	0,89	0,88	0,85	0,8
SOL	2b3	4bi	none	0,08	0,07	0,07	0,11	0,1
SOL	2b3	4d	IIA81g					0,04
SOL	2b	4ci	none	0,01	0,01	0,02	0,01	0,02
SOL	2b12	4d	IIA81g					0,02
SOL	2b2	4aii	IIA81c					0,01
SOL	2b	none	none	0,02	0,01	0,01		0,01
SOL	2b	4aii	IIA81d					0,01
SOL	2b1	4aiii	none					
SOL	2b3	4aii	IIA81c					
SOL	2b12	4biv	none					
SOL	2b23	4aiii	none					
SOL	2b	4ciii	none					
SOL	2b2	4aii	none					
SOL	2b	4ai	none					
SOL	2b	4aiv	IIA81c					
SOL	2b	4civ	none					
SOL	2b	4aiv	none					
SOL	2b	4av	none					
SOL	2b	4cii	none			0,01		
SOL	2b	4d	none					
SOL	2b12	4bii	none					
SOL	2b	4aiv	IIA81d					
SOL	2b2	4civ	IIA81f					
SOL	2b	4av	IIA81c					

Table 6.5.1.3 continued

SOL	2b	4av	IIA81d
SOL	2b12	4biv	IIA81c
SOL	2b12	4biii	none
SOL	2b12	4biii	IIA81c
SOL	2b	4e	none
SOL	2b1	none	none
SOL	2b1	4av	IIA81j
SOL	2b1	4av	IIA81a
SOL	2b1	4aiv	IIA81a
SOL	2b1	4aiii	IIa81l
SOL	2b1	4aiii	IIA81d
SOL	2b1	4aiii	IIA81a
SOL	2b1	4aii	none
SOL	2b12	4biii	IIA81i

6.5.2. Ranked derogations according to cod, sole and plaice catches in management area 2b: Skagerrak, North Sea (incl. 2EU), and Eastern Channel

Gear categories are ranked according to their catch in weight and numbers of cod, plaice and sole in Tables 6.5.2.1 and 6.5.2.2 respectively.

For cod, discard data are available for most of the major gear categories apart from 4cii and 4ciii, but interpretation of the results is hampered by the complex nature of gear categories/sub-areas/special conditions as noted in section 3.2.3.2. Gear category 4av (otter trawls with ≥120mm mesh) has the highest impact in terms of both weight and numbers of cod removed.

For both plaice and sole, beam trawlers using 80-89mm mesh (4bi) are much more important than other gear categories in terms of both weights and numbers removed. It should be noted that plaice and sole in the Skagerrak (regulated area 2b1) are considered as part of the same stocks as plaice and sole in the Kattegat (regulated area 2a). Both stocks are considered as being distinct from the North Sea stock, as are plaice and sole in the Eastern Channel (2b3). As a result, the derogation rankings for these species need to be interpreted with caution.

Note that the estimation of relative contributions of the individual derogations in terms of numbers removed is based only on the derogations for which age information is available. Derogations without any information about age compositions are disregarded in Table 6.5.2.2.

Table 6.5.2.1 North Sea, Skagerrak & Eastern Channel, Ranked derogations according to relative cod, plaice and sole catches in weight in area 2b, 2003-2007. Ranking is according to the year 2007.

SPECIES	REG_AREA	REG_GEAR	SPECON	2003	2004	2005	2006	2007
COD	2b	4av	none	0.42	0.39	0.41	0.41	0.47
COD	2b2	4aii	none	0.07	0.04	0.05	0.06	0.1
COD	2b12	4bi	none	0.12	0.11	0.1	0.09	0.06
COD	2b	4aii	IIA81d	0.04	0.02	0.02	0.02	0.05
COD	2b1	4aiii	none	0.06	0.1	0.09	0.07	0.05
COD	2b	4ciii	none	0.07	0.09	0.09	0.07	0.05
COD	2b	4aiv	none	0.01	0.02	0.03	0.02	0.04
COD	2b3	4aii	none	0.02	0.01	0.02	0.02	0.03
COD	2b	4cii	none	0.04	0.05	0.06	0.06	0.03
COD	2b23	4aiii	none	0.02	0.01	0.01	0.01	0.02
COD	2b12	4biv	none	0.02	0.04	0.03	0.04	0.02
COD	2b	none	none	0.04	0.05	0.04	0.04	0.02
COD	2b	4av	IIA81d	0.01	0.01	0.02	0.02	0.02
COD	2b	4aiv	IIA81d					0.01
COD	2b23	4aiii	IIA81d					0.01
COD	2b1	4aiii	IIA81a				0.01	0.01
COD	2b	4e	none	0.01			0.01	0.01
COD	2b12	4biii	none					
COD	2b	4ai	none					
COD	2b12	4biv	IIA81c			0.01		
COD	2b12	4biv	IIA81i					
COD	2b3	4d	IIA81g	0.01				
COD	2b3	4bii	none					
COD	2b3	4aii	IIA81c					
COD	2b2	4aii	IIA81c	0.01				
COD	2b12	4biii	IIA81i					
COD	2b3	4bi	none					
COD	2b12	4d	IIA81g					
COD	2b	4d	none					
COD	2b	4av	IIA81c					
COD	2b12	4biii	IIA81c					
COD	2b	4aiv	IIA81c					
COD	2b1	4av	IIA81a					
COD	2b	4civ	none					
COD	2b	4aii	IIA81b					
COD	2b	4ci	none	0.01				
COD	2b2	4civ	IIA81f					
COD	2b23	4aiv	IIA81a					
COD	2b1	4aii	none		0.01			
COD	2b1	4aiii	IIA81d					
COD	2b1	4aiii	IIa81l					
COD	2b1	4aiv	IIA81a					
COD	2b1	4av	IIA81j					
COD	2b1	none	none					
COD	2b12	4bii	none					
COD	2b23	4av	IIA81a				0.01	

Table 6.5.2.1, North Sea, Skagerrak and Eastern Channel, continued.

PLE	2b12	4bi	none	0.62	0.61	0.63	0.58	0.62
PLE	2b	4av	none	0.06	0.04	0.05	0.06	0.07
PLE	2b12	4biv	none	0.02	0.03	0.03	0.06	0.06
PLE	2b	4aiv	none	0.01	0.01	0.02	0.06	0.05
PLE	2b12	4biii	IIA81c	0.03	0.05	0.04	0.03	0.03
PLE	2b3	4bi	none	0.01	0.02	0.02	0.02	0.03
PLE	2b	4cii	none	0.01	0.01	0.02	0.02	0.02
PLE	2b12	4biv	IIA81c	0.04	0.03	0.03	0.02	0.01
PLE	2b23	4aiii	none	0.03	0.03	0.02	0.01	0.01
PLE	2b	none	none	0.01	0.01	0.01	0.01	0.01
PLE	2b12	4biii	IIA81i			0.01		0.01
PLE	2b2	4aii	none	0.03	0.02	0.02	0.02	0.01
PLE	2b12	4biii	none		0.01	0.01	0.01	0.01
PLE	2b3	4aii	none	0.01	0.02	0.01	0.01	0.01
PLE	2b1	4aiii	none	0.03	0.04	0.02	0.01	0.01
PLE	2b	4aiv	IIA81c	0.01	0.02	0.02	0.02	0.01
PLE	2b	4ciii	none	0.03	0.02	0.02	0.02	0.01
PLE	2b23	4av	IIA81a					
PLE	2b	4aiv	IIA81d					
PLE	2b	4av	IIA81c	0.01				
PLE	2b1	4aiii	IIA81a					
PLE	2b	4av	IIA81d					
PLE	2b	4civ	none					
PLE	2b	4ci	none					
PLE	2b	4d	none					
PLE	2b	4ai	none					
PLE	2b3	none	none					
PLE	2b3	4biii	IIA81c					
PLE	2b3	4aii	IIA81c					
PLE	2b23	none	none					
PLE	2b3	4d	IIA81g					
PLE	2b23	4aiii	IIA81d					
PLE	2b12	4bii	none					
PLE	2b	4aii	IIA81b					
PLE	2b2	4aii	IIA81c	0.02	0.01	0.01		
PLE	2b12	4d	IIA81g					
PLE	2b12	4biv	IIA81i				0.01	
PLE	2b	4aii	IIA81d		0.01			
PLE	2b	4aiv	IIA81k					
PLE	2b1	4av	IIA81j					
PLE	2b	4av	IIA81h					
PLE	2b23	4aiii	IIA81a					
PLE	2b	4e	none					
PLE	2b1	4aiv	IIA81a					
PLE	2b3	4bii	none					
PLE	2b23	4aiv	IIA81a					
PLE	2b2	4civ	IIA81f					
PLE	2b12	4biv	IIA81e				0.01	
PLE	2b1	none	none					
PLE	2b1	4av	IIA81a					
PLE	2b1	4aiii	IIa81l					
PLE	2b1	4aiii	IIA81d					
PLE	2b1	4aii	none					

Table 6.5.2.1, North Sea, Skagerrak and Eastern Channel, continued.

SOL	2b12	4bi	none	0.75	0.78	0.75	0.69	0.7
SOL	2b3	4bi	none	0.08	0.08	0.08	0.11	0.1
SOL	2b3	4d	IIA81g	0.06	0.05	0.07	0.08	0.08
SOL	2b12	4d	IIA81g	0.02	0.02	0.03	0.03	0.03
SOL	2b3	4aii	none	0.02	0.01	0.02	0.03	0.03
SOL	2b	4ci	none	0.02	0.01	0.02	0.03	0.02
SOL	2b	4cii	none			0.01		0.01
SOL	2b	none	none	0.03	0.02	0.01	0.01	0.01
SOL	2b	4aii	IIA81b					
SOL	2b23	4aiii	IIA81d					
SOL	2b2	4aii	none					
SOL	2b2	4aii	IIA81c					
SOL	2b3	none	none					
SOL	2b12	4biv	none					
SOL	2b23	none	none					
SOL	2b12	4biv	IIA81c					
SOL	2b12	4biii	none					
SOL	2b12	4biii	IIA81i					
SOL	2b12	4biii	IIA81c					
SOL	2b	4ciii	none					
SOL	2b	4ai	none					
SOL	2b	4av	none					
SOL	2b	4aii	IIA81d					
SOL	2b1	4aiii	none					
SOL	2b3	4bii	none					
SOL	2b	4aiv	IIA81d					
SOL	2b	4aiv	none					
SOL	2b	4d	none					
SOL	2b23	4aiii	none					
SOL	2b	4av	IIA81d					
SOL	2b1	4aiii	IIA81a					
SOL	2b3	4aii	IIA81c					
SOL	2b3	4biii	IIA81c					
SOL	2b3	4biii	IIA81i					
SOL	2b12	4biv	IIA81i					
SOL	2b12	4bii	none					
SOL	2b1	4av	IIA81j					
SOL	2b1	4aiv	IIA81a					
SOL	2b1	4aiii	IIa81l					
SOL	2b1	4aii	none					
SOL	2b	4av	IIA81c					
SOL	2b	4aiv	IIA81c					
SOL	2b1	4aiii	IIA81d					

Table 6.5.2.2 North Sea, Skagerrak & Eastern Channel, Ranked derogations according to relative cod, plaice and sole catches in numbers ('000) in area 2b, 2003-2007. Ranking is according to the year 2007.

SPECIES	REG_AREA	REG_GEAR	SPECON	2003	2004	2005	2006	2007
COD	2b	4av	none	0.44	0.39	0.4	0.36	0.36
COD	2b2	4aii	none	0.13	0.07	0.09	0.14	0.21
COD	2b	4aii	IIA81d	0.07	0.04	0.04	0.06	0.09
COD	2b1	4aiii	none	0.04	0.14	0.12	0.12	0.09
COD	2b12	4bi	none	0.09	0.11	0.11	0.11	0.07
COD	2b3	4aii	none				0.03	0.03
COD	2b23	4aiii	none	0.03	0.03	0.02	0.03	0.03
COD	2b	4aiv	none	0.01	0.02	0.03	0.02	0.02
COD	2b	4ciii	none	0.04	0.05	0.04	0.03	0.02
COD	2b23	4aiii	IIA81d				0.01	0.01
COD	2b12	4biv	none	0.02	0.02	0.02	0.01	0.01
COD	2b	none	none	0.04	0.03	0.04	0.02	0.01
COD	2b	4cii	none	0.03	0.03	0.04	0.03	0.01
COD	2b	4av	IIA81d	0.02	0.02	0.01	0.01	0.01
COD	2b2	4aii	IIA81c	0.01				
COD	2b	4ai	none					
COD	2b3	4bi	none					
COD	2b	4civ	none					
COD	2b	4aiv	IIA81c					
COD	2b	4aiv	IIA81d					
COD	2b	4av	IIA81c					
COD	2b12	4biii	none					
COD	2b	4e	none	0.01				
COD	2b	4ci	none					
COD	2b1	4aii	none	0.01	0.03			
COD	2b	4d	none					
COD	2b12	4biv	IIA81e					
COD	2b2	4civ	IIA81f					
COD	2b3	4aii	IIA81c					
COD	2b1	4av	IIA81a					
COD	2b1	4aiii	IIA81a					
COD	2b	4aii	IIA81b					
COD	2b23	4av	IIA81a					
COD	2b12	4biv	IIA81i					
COD	2b1	4aiii	IIA81d					
COD	2b12	4biv	IIA81c					
COD	2b12	4biii	IIA81i					
COD	2b12	4biii	IIA81c					
COD	2b12	4bii	none					
COD	2b1	4aiv	IIA81a					
COD	2b1	none	none					
COD	2b1	4av	IIA81j					
COD	2b1	4aiii	IIa81l					

Table 6.5.2.2, North Sea, Skagerrak and Eastern Channel, continued.

PLE	2b12	4bi	none	0.8	0.81	0.83	0.84	0.81
PLE	2b	4av	none	0.04	0.02	0.03	0.04	0.05
PLE	2b	4aiv	none	0.01	0.01	0.01	0.01	0.03
PLE	2b12	4biv	none	0.01	0.02	0.02	0.03	0.03
PLE	2b1	4aiii	none	0.01	0.03	0.02	0.01	0.02
PLE	2b12	4biii	none			0.01	0.01	0.01
PLE	2b	4cii	none	0.01	0.01	0.01	0.01	0.01
PLE	2b	none	none	0.01	0.01	0.01		0.01
PLE	2b2	4aii	none	0.01		0.01	0.01	0.01
PLE	2b23	4aiii	none	0.02	0.02	0.01	0.01	0.01
PLE	2b3	4bi	none	0.01	0.01	0.01	0.01	0.01
PLE	2b1	4aii	none					
PLE	2b	4e	none					
PLE	2b	4ci	none					
PLE	2b	4civ	none					
PLE	2b	4d	none					
PLE	2b1	none	none					
PLE	2b	4aii	IIA81d					
PLE	2b	4ai	none					
PLE	2b3	4aii	none	0.01	0.01			
PLE	2b3	4d	IIA81g					
PLE	2b	4ciii	none	0.01	0.01	0.01	0.01	
PLE	2b3	4aii	IIA81c					
PLE	2b	4av	IIA81c	0.01				
PLE	2b	4av	IIA81d					
PLE	2b	4av	IIA81h					
PLE	2b	4aiv	IIA81d					
PLE	2b	4aiv	IIA81c	0.01	0.01	0.01		
PLE	2b	4aii	IIA81b					
PLE	2b23	4aiii	IIA81d					
PLE	2b1	4aiii	IIA81d					
PLE	2b1	4aiii	IIA81a					
PLE	2b23	4aiv	IIA81a					
PLE	2b2	4civ	IIA81f					
PLE	2b2	4aii	IIA81c	0.01	0.01		0.01	
PLE	2b12	4biv	IIA81i					
PLE	2b12	4biv	IIA81e					
PLE	2b12	4biv	IIA81c	0.02	0.02	0.02		
PLE	2b12	4biii	IIA81i					
PLE	2b12	4biii	IIA81c	0.01				
PLE	2b12	4bii	none					
PLE	2b1	4av	IIA81j					
PLE	2b1	4av	IIA81a					
PLE	2b1	4aiii	IIa81l					
PLE	2b1	4aiv	IIA81a					

Table 6.5.2.2, North Sea, Skagerrak and Eastern Channel, continued.

SOL	2b12	4bi	none	0.87	0.89	0.88	0.85	0.8
SOL	2b3	4bi	none	0.08	0.07	0.07	0.11	0.1
SOL	2b3	4d	IIA81g					0.04
SOL	2b	4ci	none	0.01	0.01	0.02	0.01	0.02
SOL	2b12	4d	IIA81g					0.02
SOL	2b2	4aii	IIA81c					0.01
SOL	2b	none	none	0.02	0.01	0.01		0.01
SOL	2b	4aii	IIA81d					0.01
SOL	2b1	4aiii	none					
SOL	2b3	4aii	IIA81c					
SOL	2b12	4biv	none					
SOL	2b23	4aiii	none					
SOL	2b	4ciii	none					
SOL	2b2	4aii	none					
SOL	2b	4ai	none					
SOL	2b	4aiv	IIA81c					
SOL	2b	4civ	none					
SOL	2b	4aiv	none					
SOL	2b	4av	none					
SOL	2b	4cii	none			0.01		
SOL	2b	4d	none					
SOL	2b12	4bii	none					
SOL	2b	4aiv	IIA81d					
SOL	2b2	4civ	IIA81f					
SOL	2b	4av	IIA81c					
SOL	2b	4av	IIA81d					
SOL	2b12	4biv	IIA81c					
SOL	2b12	4biii	none					
SOL	2b12	4biii	IIA81c					
SOL	2b	4e	none					
SOL	2b1	none	none					
SOL	2b1	4av	IIA81j					
SOL	2b1	4av	IIA81a					
SOL	2b1	4aiv	IIA81a					
SOL	2b1	4aiii	IIa81l					
SOL	2b1	4aiii	IIA81d					
SOL	2b1	4aiii	IIA81a					
SOL	2b1	4aii	none					
SOL	2b12	4biii	IIA81i					

6.5.3. Ranked derogations according to cod, sole and plaice catches in management area 2c: Irish Sea

Ranked catch are provided in weight (Table 6.5.3.1) and numbers (Table 6.5.3.2) for cod, plaice and sole. These ranks should not be taken as absolute, as discard data is not consistently available for all years or all categories introducing bias into the ranking. STECF-SGRST also notes that in relation to catch numbers, the estimation of relative contributions of the individual derogations is based only on the derogations for which age information is available. Derogations without any information about age compositions are disregarded in Table 6.5.3.2.

Cod ranked by catch weights indicated several important categories. There have been several changes to the ranking of cod to previous years. Category 4a.ii none and 4a.iv none have previously ranked interchangeably between first and second position. In 2007 4a.ii none ranks first. This is followed by 4c.iii and 4a.ii IIA.8.d (which includes discard information for all years), previously having low rankings of little importance (1-2% and 1-13% respectively). The importance of 4a.iv none is much reduced in 2007 to its lowest across the period (just 12%). 4a.iv IIA.8.d has also declined in importance, towards levels observed in 2003. Beam trawl category 4b.i (containing discards 2004-2007) shows importance of 9% in the last two years, lower than the previous three years. All other gear categories with/without special condition are of little importance to the ranking of cod in 2007 (≤1%), or in previous years (≤5%). In relation to catch numbers, 4.a.ii IIA.8.d is ranked first, in 2007 contributing 81%. Percentage numbers have been constantly increasing for this gear category over the period, from 15% in 2003. However, no numbers information was available for the important 4a.ii none category beyond 2005. When available this category contributed 36-41%. Remaining categories have low cod numbers, including several of the larger 4a.iv categories.

Two gears dominate ranking of plaice catch weight, 4b.i beam trawl category (including discards 2004-2007) ranking first with 44-63%. The second is 4a.ii none (including discards 2003-2007, excluding 2006), this category has ranked second throughout the period. In addition this category has been consistently increasing in importance from 14% to 25% in 2007. 4a.ii IIA.8.c (including discards 2003-2007, excluding 2006) ranks third with 10% of plaice in weight, this category has also been increasing, even with low levels of effort. In 2007 4a.ii IIA.8.d (including discards 2003-2007, excluding 2006) accounted for 8% of plaice, having previously contributing ≤4%. Also worthy of note is 4a.iv none which in 2003 accounted for 20%, since which importance fell to around 4% annually. All other gear categories, with/without special condition show little importance. Plaice catch numbers for the top catch weight ranking gear category, 4b.i, were only available in 2005, where it accounted for 81% of the numbers. Of the remaining catch numbers, 13% occurred within 4a.ii none during 2005. It is likely this would be the case had information been available for the whole period. Given the lack of data from the main gear, it would not be possible to make further conclusions from the available data.

Catch weight of sole occurs primarily within the first ranking, beam trawl 4b.i (includes discards 2004-2007), prior to 2007 the percentage of sole catch weight within this category was consistently 89% or more. In 2007 however, this fell to 77%. Two other categories increased in sole percentage catch weight in 2007, the none-none category and 4a.ii none. The contribution of these categories however, remains low (12% and 8% respectively). There is little availability of catch numbers for sole in gears other than the main gear 4b.i. In 2007 numbers were available for 4a.ii none, IIA.8.c and IIA.8.d, each of which contributing only a small percentage to sole catch numbers (6%, 2%, and 2% respectively). Thus it is reasonable to assume 4b.i would likely contribute the greatest numbers regardless of increased information availability.

Table 6.5.3.1 Irish Sea. Ranked derogations according to relative cod, plaice and sole catches in weight (t), 2003-2007. Ranking is according to the year 2007.

SPECIES	REG_AREA	REG_GEAR	SPECON	2003	2004	2005	2006	2007	Average 2005-2007
COD	2c	4aii	none	0.24	0.28	0.25	0.2	0.22	0.22
COD	2c	4ciii	none	0.01	0.02		0.1	0.21	0.10
COD	2c	4aii	IIA81d	0.07	0.11	0.13	0.1	0.2	0.14
COD	2c	4aiv	none	0.34	0.18	0.19	0.22	0.12	0.18
COD	2c	4aiv	IIA81d	0.08	0.16	0.15	0.21	0.11	0.16
COD	2c	4bi	none	0.16	0.11	0.16	0.09	0.09	0.11
COD	2c	none	none	0.01	0.07		0.01	0.02	0.01
COD	2c	4aiii	none					0.01	0.00
COD	2c	4cii	none	0.01	0.02		0.01	0.01	0.01
COD	2c	4aii	IIA81c	0.03	0.03	0.04	0.04	0.01	0.03
COD	2c	4aiv	IIA81c	0.02	0.03	0.01			0.00
COD	2c	4e	none						
COD	2c	4bii	none						
COD	2c	4biii	none	0.02					
COD	2c	4ci	none			0.05			0.02
COD	2c	4av	none	0.01			0.03		0.01
COD	2c	4av	IIA81d						
PLE	2c	4bi	none	0.47	0.57	0.63	0.55	0.44	0.54
PLE	2c	4aii	none	0.14	0.16	0.17	0.19	0.25	0.20
PLE	2c	4aii	IIA81c	0.05	0.06	0.05	0.07	0.1	0.07
PLE	2c	4aii	IIA81d	0.02	0.02	0.03	0.03	0.08	0.05
PLE	2c	none	none	0.01	0.07	0.04	0.03	0.06	0.04
PLE	2c	4aiv	none	0.2	0.05	0.03	0.03	0.04	0.03
PLE	2c	4aiv	IIA81c	0.02	0.02	0.01	0.06	0.02	0.03
PLE	2c	4aiii	none		0.03	0.02	0.01	0.01	0.01
PLE	2c	4av	IIA81d	0.01					
PLE	2c	4bii	none						
PLE	2c	4aiv	IIA81d	0.02	0.02	0.02	0.02		0.01
PLE	2c	4aiii	IIA81d			0.01	0.01		0.01
PLE	2c	4av	IIA81c						
PLE	2c	4av	none	0.02					
PLE	2c	4biii	none	0.02					
PLE	2c	4ci	none						
PLE	2c	4aiv	IIA81k						
SOL	2c	4bi	none	0.89	0.91	0.93	0.89	0.77	0.86
SOL	2c	none	none	0.01	0.04	0.02	0.05	0.12	0.06
SOL	2c	4aii	none	0.03	0.03	0.02	0.04	0.08	0.05
SOL	2c	4aiv	none	0.01	0.01	0.01		0.01	0.01
SOL	2c	4aii	IIA81d		0.01	0.01	0.01	0.01	0.01
SOL	2c	4aii	IIA81c	0.01	0.01	0.01	0.01	0.01	0.01
SOL	2c	4bii	none						
SOL	2c	4aiv	IIA81c						
SOL	2c	4aiv	IIA81d						
SOL	2c	4aiv	IIA81k						
SOL	2c	4av	none						
SOL	2c	4biii	none	0.03					
SOL	2c	4aiii	none						

Table 6.5.3.2 Irish Sea. Ranked derogations according to relative cod, plaice and sole catches in numbers (‘000), 2003-2007. Ranking is according to the year 2007.

SPECIES	REG_AREA	REG_GEAR	SPECON	2003	2004	2005	2006	2007	Average 2005-2007
COD	2c	4aii	IIA81d	0.15	0.22	0.48	0.79	0.81	0.69
COD	2c	4aiv	none	0.29	0.09			0.09	0.03
COD	2c	4bi	none			0.03	0.13	0.05	0.07
COD	2c	4aiii	none					0.03	0.01
COD	2c	4aiv	IIA81d	0.17	0.2	0.09	0.08	0.02	0.06
COD	2c	4aii	none	0.36	0.49	0.41			0.14
COD	2c	4aiv	IIA81c	0.01					
COD	2c	4aiv	IIA81k						
COD	2c	4aii	IIA81c	0.01					
PLE	2c	4aii	none	0.34	0.58	0.13	0.43	0.57	0.38
PLE	2c	4aii	IIA81c	0.14	0.18	0.02	0.22	0.22	0.15
PLE	2c	4aii	IIA81d	0.05	0.07	0.03	0.12	0.18	0.11
PLE	2c	4aiv	IIA81c	0.04	0.04	0.01	0.1	0.02	0.04
PLE	2c	4aiv	none	0.4	0.07	0.01	0.06	0.01	0.03
PLE	2c	4aiv	IIA81d	0.02	0.05		0.07	0.01	0.03
PLE	2c	4aiii	none		0.01				
PLE	2c	4aiv	IIA81k	0.01					
PLE	2c	4av	IIA81c						
PLE	2c	4bi	none			0.81			0.27
PLE	2c	4aiii	IIA81d						
SOL	2c	4bi	none	1	1	1	1	0.9	0.97
SOL	2c	4aii	none					0.06	0.02
SOL	2c	4aii	IIA81c					0.02	0.01
SOL	2c	4aii	IIA81d					0.02	0.01
SOL	2c	4aiv	IIA81d						
SOL	2c	4aiv	none						

6.5.4. Ranked derogations according to cod catches in management area 2d: West of Scotland

From Table 6.5.4.1 the most important category in terms of cod landings is 4.a.v (no special condition) with over 40% of the VIa cod catch by weight. The second most important gear category is 4.a.iv none and the third 4.a.ii none, which from section 6.3.5 can be seen to be a gear category with *Nephrops* as the primary landed species. The contribution of category 4.a.iv none to the cod catch had been decreasing over the period considered but has increased again in 2007. If a three year average is made of the percentage contributions the rankings remain consistent, with the exception that 4.a.v IIA8d is elevated to 6th position. More broadly, the ranking shows how trawl gears of mesh size ranges 120mm+, 100-119mm and 70-89mm are most significant to cod catches in area 2d with no other gear type taking more than 1% of catch by weight.

If ranking is performed in terms of numbers of fish (Table 6.5.4.2) the top three ranking according to 2007 remain as for weight caught. If three year mean values are used however, gear category 4.a.ii (no special condition) ranks second. The explanation comes from Figure 6.3.5.3 of section 6.3.5 where it can be seen that catch of cod by this smaller mesh gear is predominantly at ages one and two including high rates of discarding whereas gear categories 4.a.iv and 4.a.v catch a broader age range. The contribution of category 4.a.iv to cod catches has, as for weights caught, increased significantly in 2007.

STECF-SGRST notes that the estimation of relative contributions to Table 6.5.4.2 uses only categories for which age information is available. Categories without any information about age compositions are disregarded in Table 6.5.4.2.

Table 6.5.4.1 West of Scotland. Ranked derogations according to relative cod catch in tonnes(in area 2d, 2003-2007. Ranking is according to the year 2007.

SPECIES	REG_AREA	REG_GEAR	SPECON	2003	2004	2005	2006	2007	Mean 05-07
COD	2d	4av	none	0.48	0.42	0.44	0.45	0.4	0.43
COD	2d	4aiv	none	0.2	0.15	0.12	0.09	0.29	0.17
COD	2d	4aii	none	0.1	0.11	0.11	0.16	0.09	0.12
COD	2d	4aiv	IIA81d	0.08	0.14	0.16	0.13	0.08	0.12
COD	2d	4aii	IIA81d	0.09	0.08	0.05	0.06	0.04	0.05
COD	2d	4aiii	IIA81d	0.01	0.03	0.03	0.02	0.03	0.03
COD	2d	4aiii	none	0.02	0.01	0.01	0.01	0.02	0.01
COD	2d	4cii	none			0.01	0.01	0.01	0.01
COD	2d	4av	IIA81d	0.01	0.03	0.06	0.05	0.01	0.04
COD	2d	4aii	IIA81c						
COD	2d	4aiv	IIA81c						
COD	2d	4e	none		0.01	0.01	0.01		0.01
COD	2d	4av	IIA81c						
COD	2d	4biv	none		0.01				
COD	2d	none	none				0.02		0.02
COD	2d	4ciii	none						

Table 6.5.4.2 West of Scotland. Ranked derogations according to relative cod catches in numbers (‘000) in area 2d, 2003-2007. Ranking is according to the year 2007.

SPECIES	REG_AREA	REG_GEAR	SPECON	2003	2004	2005	2006	2007	Mean 05-07
COD	2d	4av	none	0.43	0.24	0.31	0.3	0.33	0.31
COD	2d	4aiv	none	0.17	0.09	0.08	0.05	0.25	0.13
COD	2d	4aii	none	0.14	0.26	0.25	0.28	0.12	0.22
COD	2d	4aii	IIA81d	0.12	0.17	0.14	0.14	0.09	0.12
COD	2d	4aiv	IIA81d	0.08	0.14	0.1	0.13	0.08	0.10
COD	2d	4aiii	IIA81d	0.02	0.06	0.08	0.04	0.07	0.06
COD	2d	4aiii	none	0.02	0.01	0.01	0.03	0.05	0.03
COD	2d	4av	IIA81d	0.01	0.02	0.04	0.03	0.01	0.03
COD	2d	4aiv	IIA81c						
COD	2d	none	none						

6.6. Unregulated gears

6.6.1. Unregulated gears introduction

In the summary tables above of effort and catches, the ‘none none’ category represents i) unregulated gear types and mesh sizes in addition to ii) unidentified mesh sizes. STECF has attempted to provide a break down of the main gears within this category in effort (kW*Days at sea), cod catches, plaice catches and sole catches. This analysis should help to identify any gears contributing significantly to landings of these species but which are not currently regulated.

This is the first year for which detailed analysis of this type has been attempted and following completion of the tables in the report, some inconsistencies were identified which need to be investigated. For this reason some care is required in interpretation of the data until any required amendments are completed.

6.6.2. Unregulated gear in management area 2a: Kattegat

Category ‘none none’ represents unregulated gear types and mesh sizes in addition to unidentified mesh sizes. This section provides a break down of the main gears within this category in effort (kW*Days at sea), cod catches, plaice catches and sole catches.

Table 6.6.2.1 Kattegat:

ANNEX	REG AREA	REG GEAR	Gear code	Mesh size	2000	2001	2002	2003	2004	2005	2006	2007
IIa	2a	none	PEL_TRAWL	32-54	209578	489262	450054	530994	481854	466868	408804	378988
IIa	2a	none	OTTER	32-54	245419	212725	207959	278812	184132	234521	293215	199137
IIa	2a	none	OTTER	<16	56451	95192	108281	116642	97799	169814	110362	93701
IIa	2a	none	POTS	none	43946	58700	52602	51819	85806	63686	68260	81938
IIa	2a	none	DREDGE	>=120	5377		354	441		1081	6504	4146
IIa	2a	none	DREDGE	32-54								2648
IIa	2a	none	OTTER	55-69	2597	1676	978		898	5065	6887	2565
IIa	2a	none	GILL	none		118		1595	247		853	110
IIa	2a	none	DREDGE	none	110					408		108
IIa	2a	none	BEAM	16-31				125	35150			
IIa	2a	none	DEM_SEINE	<16				221				
IIa	2a	none	DEM_SEINE	32-54				371				
IIa	2a	none	DEM_SEINE	none						353		
IIa	2a	none	DREDGE	100-119					773	129		
IIa	2a	none	DREDGE	16-31				93			22	
IIa	2a	none	DREDGE	55-69			212					
IIa	2a	none	DREDGE	80-89				187				
IIa	2a	none	DREDGE	90-99	1796	5718						
IIa	2a	none	none	none					257	2148	11	
IIa	2a	none	OTTER	none		210						
IIa	2a	none	PEL_SEINE	32-54			2760					
				SUM	565274	863601	823200	981300	886916	944073	894918	763341

Table 6.6.2.2 Kattegat

ANNEX	REG AREA	SPECIES	REG GEAR	Gear code	Mesh size	2003	2004	2005	2006	2007
IIa	2a	COD	none	none	none	206.3262	132.5466	110.5788	84.81688	33.80115
IIa	2a	COD	none	POTS	none					0
IIa	2a	COD	none	DREDGE	16-31	8.44E-03				
IIa	2a	COD	none	DREDGE	80-89	3.75E-03				
IIa	2a	COD	none	DREDGE	none			4.38E-02		
IIa	2a	COD	none	GILL	none	0.17017	0.047254	0.965983	9.49E-03	
					sum	2.07E+02	132.5939	111.5886	84.82637	33.80115

Table 6.6.2.3 Kattegat

ANNEX	REG AREA	SPECIES	REG GEAR	Gear code	Mesh size	2003	2004	2005	2006	2007
IIa	2a	PLE	none	none	none	290.0946	266.3526	185.5794	213.912	201.6332
IIa	2a	PLE	none	GILL	none	2.598724	0.866575	0.159238	0.268885	0.485161
IIa	2a	PLE	none	POTS	none					0
IIa	2a	PLE	none	DEM_SEIN	none			0.692362		
IIa	2a	PLE	none	DREDGE	16-31	3.29E-03				
IIa	2a	PLE	none	DREDGE	none			1.95E-02		
					sum	292.6967	267.2192	186.4505	214.1809	202.1184

Table 6.6.2.4 Kattegat

ANNEX	REG AREA	SPECIES	REG GEAR	Gear code	Mesh size	2003	2004	2005	2006	2007
IIa	2a	SOL	none	none	none	55.32264	77.61721	192.2756	156.7495	70.69542
IIa	2a	SOL	none	GILL	none	0.350831	0.108039	0.129895	0.32765	0.132561
IIa	2a	SOL	none	DREDGE	>=120					2.81E-03
IIa	2a	SOL	none	POTS	none	0	0	0	0	0
IIa	2a	SOL	none	DEM_SEIN	none			5.85E-04		
IIa	2a	SOL	none	DREDGE	none			3.26E-02		
					sum	55.67347	77.72524	192.4387	157.0771	70.83079

6.6.3. Unregulated gear in management area 2b:Skagerrak, North Sea , Eastern Channel

Category ‘none none’ represents unregulated gear types and mesh sizes in addition to unidentified mesh sizes. This section provides a break down of the main gears within this category in effort (kW*Days at sea), cod catches, plaice catches and sole catches.

Table 6.6.3.1 Skagerrak, North Sea and East Channel:

ANNEX	REG AREA	REG GEAR	Gear code	Mesh size	2000	2001	2002	2003	2004	2005	2006	2007
IIa	2b	none	BEAM	<16	143638	156126	39308342	39235040	45814350	40509138	30156008	28368816
IIa	2b	none	BEAM	16-31	13023176	12904072	29866667	32029667	32300490	29116645	22782549	22133554
IIa	2b	none	BEAM	32-54	8497300	8779937	9022253	9775326	11463036	11675792	11493177	12162302
IIa	2b	none	BEAM	55-69	8151722	7530446	7490093	8532403	8720832	7824661	6908489	4964341
IIa	2b	none	BEAM	70-79	11592101	13127187	11608835	10589692	11078748	6477774	6656502	3584468
IIa	2b	none	BEAM	none	2522271	2656440	2757774	3040739	2997450	2995174	3176566	3234743
IIa	2b	none	DEM_SEINE	<16	66313	110870	183312	213536	733975	2428888	3347906	3162655
IIa	2b	none	DEM_SEINE	32-54	2700026	3089104	3091831	3689972	3859308	2768883	2612630	2450725
IIa	2b	none	DEM_SEINE	55-69	434734	417015	1031468	1171476	1143628	580453	1245538	1093990
IIa	2b	none	DEM_SEINE	none	1764309	1332271	1321360	1305934	1254550	1251461	1130691	721201
IIa	2b	none	DREDGE	<16	1012641	1117357	1131033	1354263	1327140	703013	744144	515776
IIa	2b	none	DREDGE	>=120	73628	87143	71383	178130	104750	115611	141867	256733
IIa	2b	none	DREDGE	100-119	293047	105457	122627	500984	507794	229162	73890	249764
IIa	2b	none	DREDGE	16-31	342106	390760	297243	544452	653789	467189	279316	214359
IIa	2b	none	DREDGE	32-54	56635	29877	94048	104863	89746	53187	97794	189321
IIa	2b	none	DREDGE	55-69	453733	841143	915569	787681	950741	376347	145253	152674
IIa	2b	none	DREDGE	70-79	18005	11600	1232	72487	159411	260504	159230	139063
IIa	2b	none	DREDGE	80-89	580937	324469	617117	354453	330305	78477	46810	71804
IIa	2b	none	DREDGE	90-99	24450	2002	17943	51462	41116	20085	45956	49355
IIa	2b	none	DREDGE	none	58947	40438	68490	38697	29315	88700	33394	44791
IIa	2b	none	GILL	31-49	1338	780		1120	2387	9582	17694	43292
IIa	2b	none	GILL	none	231243	294204	512509	230559	170238	48688	35084	36070
IIa	2b	none	none	none	3299	29904	1708	27658	15770	14940	26216	31613
IIa	2b	none	OTTER	<16	2141	1338			2271	10072	27604	28780
IIa	2b	none	OTTER	32-54	75319	232540	237478	113008	96147	47623	30258	27551
IIa	2b	none	OTTER	55-69				14850	23870	33726	33000	22280
IIa	2b	none	OTTER	none	170180	222020	241248	447906	178958	52628	10232	21126
IIa	2b	none	PEL_SEINE	<16	831		221	6205	2369	6283	21211	15934
IIa	2b	none	PEL_SEINE	32-54	12653	12528	5474	11148	8677	17660	2803	9337
IIa	2b	none	PEL_SEINE	55-69	26365	42922	6375	3378	2197	3460	9964	7501
IIa	2b	none	PEL_SEINE	none	1618	4300					2480	7281
IIa	2b	none	PEL_TRAWL	<16	25210	9430	26486	310086	579108	449012	34401	3734
IIa	2b	none	PEL_TRAWL	32-54	4112	358	358			6682		3690
IIa	2b	none	PEL_TRAWL	55-69		223	3450	470	3409	2132	1386	2427
IIa	2b	none	PEL_TRAWL	none	4012	1044	3648	93		1351		1835
IIa	2b	none	POTS	>=220								153
IIa	2b	none	POTS	100-109	10709		4388	9871	593	1779		
IIa	2b	none	POTS	10-30								
IIa	2b	none	POTS	110-149		15228						
IIa	2b	none	POTS	150-219	8100	6000						
IIa	2b	none	POTS	31-49	4360				3318	1650		
IIa	2b	none	POTS	50-59	1352		7393	1337	720	10876		
IIa	2b	none	POTS	60-69	492						2718	
IIa	2b	none	POTS	70-79			1112					
IIa	2b	none	POTS	80-89						2836	8656	
IIa	2b	none	POTS	none	47269	9107		2160				
IIa	2b	none	TRAMMEL	31-49								
IIa	2b	none	TRAMMEL	none	102076	35073	2947	6336	14542	892		
				SUM	52542398	53970713	110073415	114757442	124665048	108743016	91541417	84023039

Table 6.6.3.2 Skagerrak, North Sea and East Channel:

ANNEX	REG AREA	SPECIES	REG GEAR	Gear code	Mesh size	2003	2004	2005	2006	2007
IIa	2b	COD	none	none	none	2077.345	2650.199	2063.084	1351.853	932.6268
IIa	2b	COD	none	OTTER	none	289.146	126.1776	76.35012	682.4461	160.6736
IIa	2b	COD	none	GILL	none	53.08479	17.3288	5.659155	15.57015	77.68761
IIa	2b	COD	none	POTS	none	25.3136	32.23136	34.216	30.748	22.804
IIa	2b	COD	none	DREDGE	>=120		2.874497	4.883991	8.985096	11.22706
IIa	2b	COD	none	DREDGE	none	1.4111	0.074	0.478	2.29794	9.13115
IIa	2b	COD	none	TRAMMEL	none	43.09	12.94	4.621143	10.5	3.77
IIa	2b	COD	none	DREDGE	80-89	1.648	1.24	0.056	0.308	1.32
IIa	2b	COD	none	DEM_SEIN	none			3.59658		1.10916
IIa	2b	COD	none	DREDGE	16-31	2.35E-02		0.003		0.53
IIa	2b	COD	none	PEL_TRAW	none	3.24	1.14		0.04	0.28
IIa	2b	COD	none	BEAM	none	1.56	0.64	0.7471		0.14
IIa	2b	COD	none	DREDGE	90-99	0.585881	4.908381	0.36	0.468	0.092
IIa	2b	COD	none	DREDGE	100-119			0.25		
					sum	2496.448	2849.753	2194.305	2103.216	1221.391

Table 6.6.3.3 Skagerrak, North Sea and East Channel:

ANNEX	REG AREA	SPECIES	REG GEAR	Gear code	Mesh size	2003	2004	2005	2006	2007
IIa	2b	PLE	none	none	none	1590.691	1434.722	1304.847	1255.209	868.91
IIa	2b	PLE	none	OTTER	none	264.3	268.898	115.5743	67.46736	664.5068
IIa	2b	PLE	none	DREDGE	90-99	22.43488	64.46631	184.832	137.744	138.5091
IIa	2b	PLE	none	GILL	none	38.14674	26.65071	2.570127	2.923173	60.48225
IIa	2b	PLE	none	DREDGE	80-89	99.568	160.836	247.44	110.36	36.36
IIa	2b	PLE	none	DREDGE	none	77.8184	40.64432	37.7438	19.49103	11.32486
IIa	2b	PLE	none	DREDGE	>=120	2.24	0.701118	11.03325	0.631879	6.474514
IIa	2b	PLE	none	TRAMMEL	none	69.4	72	36.70471	25.2	6.07
IIa	2b	PLE	none	DREDGE	100-119	2.2	0.25	2.5	0.3	2.95
IIa	2b	PLE	none	BEAM	none	211.9	89.44	70.40922	2.3	1.56
IIa	2b	PLE	none	PEL_TRAW	none	12.36	1.28E+01	2.58	2.08E+00	1.12
IIa	2b	PLE	none	POTS	none	0.676	1.018	0.682	1.444	1.0628
IIa	2b	PLE	none	DREDGE	16-31	1.33E-02		0.13	0.16	0.09
IIa	2b	PLE	none	POTS	80-89					0.01
IIa	2b	PLE	none	DEM_SEIN	none			0.3424		
IIa	2b	PLE	none	DREDGE	70-79	0.12				
					sum	2391.868	2172.387	2017.389	1625.31	1799.43

Table 6.6.3.4 Skagerrak, North Sea and East Channel:

ANNEX	REG AREA	SPECIES	REG GEAR	Gear code	Mesh size	2003	2004	2005	2006	2007
IIa	2b	SOL	none	none	none	181.7491	308.194	186.3474	119.5757	211.0371
IIa	2b	SOL	none	OTTER	none	573.792	419.71	148.654	120.788	163.832
IIa	2b	SOL	none	GILL	none	175.52	74.5362	9.646273	10.77034	118.8389
IIa	2b	SOL	none	TRAMMEL	none	264.4	258.78	74.46	106.1	60.28
IIa	2b	SOL	none	DREDGE	80-89	62.88	175.56	190.92	76.04	31.12
IIa	2b	SOL	none	DREDGE	90-99	8.27929	32.4	66.644	31.876	30.56
IIa	2b	SOL	none	DREDGE	none	42.46615	25.14406	52.74014	28.6204	10.2076
IIa	2b	SOL	none	DREDGE	>=120	1.44	1.36	2.24	1.246152	4.158354
IIa	2b	SOL	none	POTS	none	0.014	0.548	0.044	0.728	3.226
IIa	2b	SOL	none	BEAM	none	224.22	124.56	20.6969	3.4	2.32
IIa	2b	SOL	none	PEL_TRAW	none	28.578	10.82	8.08	5.92	1.14
IIa	2b	SOL	none	DREDGE	100-119	0.4	0.45	1.165	0.005	0.2
IIa	2b	SOL	none	POTS	80-89					0.08
IIa	2b	SOL	none	DREDGE	16-31	1.000975		0.004	0.02	0.05
IIa	2b	SOL	none	DREDGE	70-79		1.20E-02			
					sum	1564.74	1432.074	761.6417	505.0896	637.0499

6.6.4. Unregulated gear in management area 2c: Irish Sea

Category 'none none' represents unregulated gear types and mesh sizes in addition to unidentified mesh sizes. This section provides a break down of the main gears within this category in effort (kW*Days at sea), cod catches, plaice catches and sole catches.

'None none' effort was relatively high within the Irish Sea prior to 2003, accounting for approximately 50% of overall effort. A large proportion of this group was due to Irish effort reported without mesh size information. Since 2003, this category has represented approximately 26-35% of nominal effort.

The majority of effort within this grouping prior to 2003 can be divided into 3 main groups, OTTER, which are bottom trawls, DREDGE, and BEAM. Of these, OTTER contained the greatest effort, between 40-46%. From 2003 onwards this group accounts for 1.3% to 5.5%. The majority of effort is subsequently allocated to the dredge group, 55-67%, and much of the remainder to pots 26-42%. In 2007, all effort was assigned to this new dominant gear groups, with the exception of 3.3% allocated to the otter group and just 0.4% to the none-none group.

In relation to landings, for each cod, plaice and sole, OTTER none resulted in the greatest none-none landings during 2007 (at 22.7t, 45t, and 49.7t respectively). All remaining, minimal landings occurred from either dredges or pots. For cod, annual landings of OTTER none fluctuate from low landings to those observed in 2007 (Table 6.6.4.2). Plaice landings also appear to fluctuate, although landings are generally higher (Table 6.6.4.3). Landings for sole however, appear to be increasing within this group over time (Table 6.6.4.4).

Table 6.6.4.1. Irish Sea. Unregulated gear (category none-none) effort composition in kW*Days at sea by gear type, 2000-2007.

ANNEX	REG AREA	REG GEAR	Gear code	Mesh size	2000	2001	2002	2003	2004	2005	2006	2007
IIa	2c	none	DREDGE	none	866252	995883	942782	994953	853510	663173	672076	911705
IIa	2c	none	POTS	none	211571	221410	400757	569398	518769	567760	613889	601514
IIa	2c	none	DREDGE	100-119	9135	113876	185669	299456	99180	303619	282808	226958
IIa	2c	none	DREDGE	80-89	448903	417028	293345	204543	394989	233446	68188	181764
IIa	2c	none	PEL_TRAWL	32-54	54254	108118	92503	134225	187094	197503	154713	177893
IIa	2c	none	OTTER	none	1952035	1750179	1739353	29840	110224	24342	18948	59600
IIa	2c	none	POTS	80-89	34054	40844	1246			207	6210	28152
IIa	2c	none	none	none		1418	94640		13200	4260		12684
IIa	2c	none	DREDGE	16-31							8449	12362
IIa	2c	none	BEAM	16-31	13534	17018	7906	7236	1966	25324	8236	9006
IIa	2c	none	PEL_TRAWL	55-69		21373				14700	2041	4853
IIa	2c	none	DREDGE	<16	4203		998			3548		4021
IIa	2c	none	DREDGE	90-99		2706				1025		2988
IIa	2c	none	BEAM	<16								1470
IIa	2c	none	OTTER	<16			3651	990	1042	1416	666	879
IIa	2c	none	OTTER	32-54				404		3936	6070	480
IIa	2c	none	DREDGE	>=120				888				380
IIa	2c	none	BEAM	70-79				1326				
IIa	2c	none	BEAM	none	1600104	1313368	1582166	46224	349850			
IIa	2c	none	DEM_SEINE	<16							142	
IIa	2c	none	DEM_SEINE	none	46360	57558	53660		1518			
IIa	2c	none	DREDGE	70-79	2444		1165	73685	7247	880		
IIa	2c	none	GILL	31-49								
IIa	2c	none	GILL	none	11176	27229	57486	3667	15845			
IIa	2c	none	OTTER	55-69							120	
IIa	2c	none	PEL_SEINE	32-54	20940	22729	29223	45458	19482	61552	34310	
IIa	2c	none	PEL_SEINE	none				2496	6020			
IIa	2c	none	PEL_TRAWL	<16				5376	18368	448		
IIa	2c	none	PEL_TRAWL	none	115674	110044	31667	5962	58120	2024		
IIa	2c	none	POTS	100-109			801	1434				
				SUM	5390639	5220781	5519018	2427561	2656424	2109163	1876866	2236709

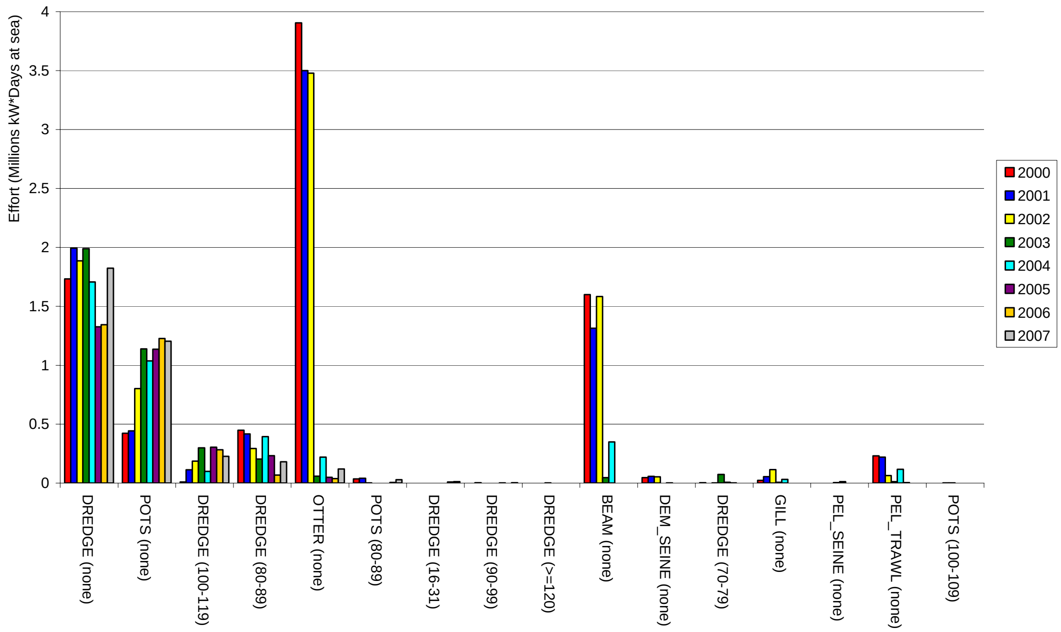


Figure 6.6.4.1. Irish Sea. Unregulated gear (category none-none) effort composition in kW*Days at sea by gear type, 2000-2007.

Table. 6.6.4.2. Irish Sea. Unregulated gear (category none-none) cod catch composition by gear type, 2000-2007.

ANNEX	REG AREA	SPECIES	REG GEAR	Gear code	Mesh size code	2003	2004	2005	2006	2007
IIa	2c	COD	none	OTTER	none	9.64	20.78	3.14	8.50	22.70
IIa	2c	COD	none	POTS	none	1.61	7.06	0.53	0.57	0.20
IIa	2c	COD	none	BEAM	none	0.44	15.93			
IIa	2c	COD	none	DREDGE	none	1.10	2.68	0.30	0.09	
IIa	2c	COD	none	GILL	none	1.11	39.53			
IIa	2c	COD	none	PEL_SEINE	none	0.28	2.26			
IIa	2c	COD	none	PEL_TRAWL	none	4.41	2.80			

Table. 6.6.4.3. Irish Sea. Unregulated gear (category none-none) plaice catch composition by gear type, 2003-2007.

ANNEX	REG AREA	SPECIES	REG GEAR	Gear code	Mesh size code	2003	2004	2005	2006	2007
IIa	2c	PLE	none	OTTER	none	10.39	15.24	42.37	27.90	45.02
IIa	2c	PLE	none	DREDGE	none	2.19	8.24	6.42	1.72	0.42
IIa	2c	PLE	none	BEAM	none	8.94	60.53			
IIa	2c	PLE	none	DEM_SEINE	none		0.20			
IIa	2c	PLE	none	PEL_SEINE	none		0.53			
IIa	2c	PLE	none	PEL_TRAWL	none		3.07			
IIa	2c	PLE	none	POTS	none	1.94	2.89	0.09		

Table. 6.6.4.4. Irish Sea. Unregulated gear (category none-none) sole catch composition by gear type, 2003-2007.

ANNEX	REG AREA	SPECIES	REG GEAR	Gear code	Mesh size code	2003	2004	2005	2006	2007
IIa	2c	SOL	none	OTTER	none	1.18	5.92	9.91	21.32	49.73
IIa	2c	SOL	none	DREDGE	none	7.63	3.84	8.41	4.52	7.38
IIa	2c	SOL	none	POTS	none	0.30				0.00
IIa	2c	SOL	none	BEAM	none	2.53	15.89			
IIa	2c	SOL	none	PEL_TRAWL	none		0.18			

6.6.5. Unregulated gear in management area 2d: West of Scotland

Category 'none none' represents unregulated gear types and mesh sizes in addition to unidentified mesh sizes. This section provides a break down of the main gears within this category in terms of effort (kW*Days at sea) and cod, plaice and sole catches.

'None none' effort was relatively high West of Scotland prior to 2003, accounting for approximately 26% of overall effort in 2002. A considerable proportion of this group was due to Irish effort reported without mesh size information. In 2003, the proportion of nominal effort represented by this category fell to 16%, but this proportion has gradually increased since so that in 2007 it stands at 21%. From Table 6.6.5.1 and Figure 6.6.5.1 dramatic reductions in the 'OTTER' and 'PEL_SEINE' categories can be seen from 2003. It can be inferred the Irish effort with unreported mesh size belonged to these categories. Categories still significant after 2002 are dredges and pots. Effort by dredge gears has declined to roughly one third of effort in 2002. Effort using pots has increased however since 2000 and appears to have increased more quickly than before in 2007.

Tables 6.6.5.2 to 6.6.5.4 show catches of cod, plaice and sole by gear sub-category. It can be seen that insignificant amounts of these species are caught within the none.none category.

Table. 6.6.5.1. West of Scotland. Unregulated gear (category none-none) effort (kW*Days) by gear type, 2000-2007.

ANNEX	REG AREA	REG GEAR	Gear code	Mesh size	2000	2001	2002	2003	2004	2005	2006	2007
IIa	2d	none	PEL_TRAWL	32-54	3694488	4339471	6822704	9805347	12718801	10665367	9087503	7891840
IIa	2d	none	POTS	none	1233122	1585450	1633100	1720638	1781039	1778467	1726539	2192314
IIa	2d	none	POTS	31-49	439777	698045	650014	749993	650451	649554	635322	647667
IIa	2d	none	PEL_TRAWL	55-69	168025	214250	388241	604766	529190	541731	274468	522679
IIa	2d	none	DREDGE	none	1375609	1418559	1412110	1158279	1055447	805198	703940	394654
IIa	2d	none	POTS	70-79	406304	185881	115962	123911	220749	270911	341531	389271
IIa	2d	none	DREDGE	100-119	313915	468272	446415	479584	369690	469223	340104	362287
IIa	2d	none	none	none	99544	112478	120136	103862	53554	159222	101840	141180
IIa	2d	none	PEL_SEINE	32-54	398512	439291	353841	230535	266254	157776	186486	113645
IIa	2d	none	POTS	10-30	12612	11646	9607	2850	4051	16680	19199	47818
IIa	2d	none	DREDGE	80-89	160611	60149	228824	80777	84263	67202	38538	44538
IIa	2d	none	DREDGE	<16	1553	5409	18329	23576	87738	112651	45486	35986
IIa	2d	none	OTTER	32-54	441790	341159	432069	177182	440639	653751	276280	34176
IIa	2d	none	DREDGE	>=120	5906	1115	13320	10919	7442	4114	6946	15782
IIa	2d	none	DREDGE	32-54	65102	14680	66262	123388	38370	9539	15114	11177
IIa	2d	none	POTS	50-59	8488	8001	2192	5420	13041	9203	11900	10511
IIa	2d	none	POTS	60-69	20178	6075	5873	1449	15568	16789	1827	9480
IIa	2d	none	OTTER	none	1576333	1553536	1185709	32986	57458	6906	26014	6628
IIa	2d	none	DREDGE	70-79	14499	50611	22549	49425	16704	22239	7298	3207
IIa	2d	none	DREDGE	90-99	1936		2	0				2624
IIa	2d	none	POTS	100-109	643	1185	764	480			1120	2487
IIa	2d	none	POTS	80-89	17480	4946	4793	6737	8747	12096	7235	1377
IIa	2d	none	OTTER	<16	78347	25050	23199	402	18768	224		243
IIa	2d	none	PEL_TRAWL	none	2205900	1409948	2243144	187002	164132	1626		202
IIa	2d	none	GILL	none	3734	19091	72749	7225	5275	588	1044	41
IIa	2d	none	BEAM	none	21046	22968			20272			
IIa	2d	none	DEM_SEINE	none	149226	48394	61770	1288				
IIa	2d	none	DREDGE	16-31	8621	9317	6331	1370	15932	4357	936	
IIa	2d	none	DREDGE	55-69		2590	256	4144				
IIa	2d	none	GILL	31-49								
IIa	2d	none	OTTER	55-69	18824		4634	8726	12528		164	
IIa	2d	none	PEL_SEINE	55-69		8015						
IIa	2d	none	PEL_TRAWL	<16				4697				
IIa	2d	none	POTS	>=220	18027		1890		280	6112	2048	
IIa	2d	none	POTS	110-149		135	742	3308	2880			
IIa	2d	none	POTS	90-99		116						
IIa	2d	none	TRAMMEL	none					115	5410	428	
				SUM	12960152	13065833	16347531	15710266	18659378	16446936	13859310	12881814

Table. 6.6.5.2. West of Scotland. Unregulated gear (category none-none) cod catch by gear type, 2003-2007.

ANNEX	REG AREA	SPECIES	REG GEAR	Gear code	Mesh size code	2003	2004	2005	2006	2007
IIa	2d	COD	none	OTTER	none	0.914	1.827	0.144	20.122	0.098
IIa	2d	COD	none	DEM_SEINE	none	0.713				
IIa	2d	COD	none	DREDGE	none	0.185	1.010			
IIa	2d	COD	none	GILL	none	0.142		0.240		
IIa	2d	COD	none	POTS	110-149	0.454	0.222			
IIa	2d	COD	none	POTS	70-79				0.001	
IIa	2d	COD	none	POTS	none	0.031	0.127			
Sum						2.438	3.187	0.384	20.123	0.098

Table. 6.6.5.3. West of Scotland. Unregulated gear (category none-none) plaice catch by gear type, 2003-2007.

ANNEX	REG AREA	SPECIES	REG GEAR	Gear code	Mesh size code	2003	2004	2005	2006	2007
IIa	2d	PLE	none	POTS	none	0.0336	1.3249	0.13	0.0189	0.0084
IIa	2d	PLE	none	DREDGE	none	0.01952	0.6003	0.023968	0.00642	0.00735
IIa	2d	PLE	none	BEAM	none		7.3416			
IIa	2d	PLE	none	DEM_SEINE	none	0.5992				
IIa	2d	PLE	none	DREDGE	100-119	0.015				
IIa	2d	PLE	none	GILL	none	0.7931	0.18125			
IIa	2d	PLE	none	OTTER	none	3.22768	6.3462			
IIa	2d	PLE	none	POTS	110-149	0.0535	0.0963			
IIa	2d	PLE	none	POTS	70-79				0.00321	
Sum						4.7416	15.8906	0.153968	0.02853	0.01575

Table. 6.6.5.4. West of Scotland. Unregulated gear (category none-none) sole catch by gear type, 2003-2007

ANNEX	REG AREA	SPECIES	REG GEAR	Gear code	Mesh size code	2003	2004	2005	2006	2007
IIa	2d	SOL	none	DREDGE	none	0.9189	0.62398	0.1344	0.0693	0.00105
IIa	2d	SOL	none	BEAM	none		2.1546			
IIa	2d	SOL	none	DEM_SEINE	none	0.0399				
IIa	2d	SOL	none	DREDGE	100-119	0.005				
IIa	2d	SOL	none	GILL	none	1.0094	0.227152			
IIa	2d	SOL	none	OTTER	none	0.878104	2.513176			
IIa	2d	SOL	none	POTS	none	0.0231	0.183268			
Sum						2.874404	5.702176	0.1344	0.0693	0.00105

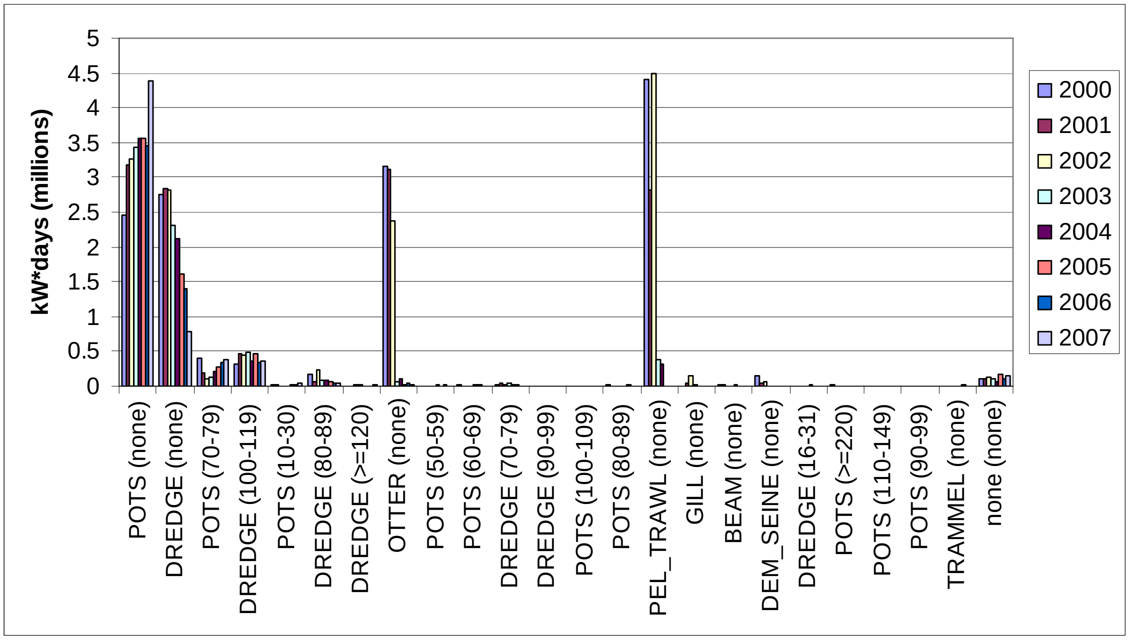


Figure 6.6.5.1 West of Scotland. Unregulated gear (category none-none) effort (kW*Days) by gear type, 2000-2007.

6.7. Fishing effort and catches (landings and discards) of cod, sole and plaice and associated species of vessels <10m

6.7.1. Introduction

Previously, information on vessels <10m has been provided in the STECF SGRST reports only as a series of individual country reports describing activities and landings. In this report individual country information is again provided where available – new information is provided from several countries. An attempt is also made to compile available information for each area into overall figures. Since not all countries were able to fulfil this part of the data call, the aggregate estimates for each region of the cod recovery zone must be considered as minimum estimates. Nevertheless, they begin to give an idea of the scale of landings contributed by these smaller classes of vessel.

6.7.2. Vessels <10m in management area 2a: Kattegat

The text table below shows the landings taken in Kattegat by vessels < 10 m as reported/estimated by the member states. Notice, that in Kattegat only Denmark and Sweden contribute to these landings. It must be stressed that the figures must be considered as minimum estimates.

	Sweden	Denmark	Germany	Belgium	France	Scotland	E&W	Ireland	Spain	Portugal	Netherlands	Total
cod	15.7	64			0	0	0	0				79.7
plaice	25.4	239			0	0	0	0				264.4
sole	10.3	79				0		0				89.3
hake	1.2	0			0	0	0	0				1.2
Nephrops	9.5	10			0			0				19.5

Denmark

Landings and effort data for vessels less than 10m were provided by Denmark. Vessels less than 10m are included in the general database in a similar way as the vessels >10m (with mandatory logbook submission). Landings from vessels < 10 m are recorded through sale slips register as for larger boats, and information on their effort provided through declarations of which area the fishing trip took place ("farvandserklæring") and which gear was used for each fishing day. The level of effort is estimated as 1 (one) fishing day per registered trip, as most vessels engage in day-trip fishery. As such, information is often known on landings composition, and area. Gear and mesh size is often missing, and no indication is provided at the ICES rectangle level.

Between 2003 and 2007 Danish vessels < 10m landed between 2% and 4% of the total Danish landings for this area. However, they contributed a much larger share of landings of the demersal species, with up to 20% of landings of plaice, 23% of cod and 35% of sole, but less than 1% of *Nephrops*. Annual landings are listed in Table 6.7.2.1 for the years 2003-2007.

Vessels <10m make the largest share of unallocated trips (90-100% of landings of cod, plaice and sole). Most of the landings with reported gear information are seen for gillnets, with an average share compared to total Danish gillnet landings for that area of 34% for cod, 12% for plaice and 20% for sole. Only very small or no landings were reported for towed gears (Danish seine and otter trawl).

Table 6.7.2.2 lists and Figure 6.7.2.1 shows the total nominal effort in Kattegat for vessels below 10m for the years 2000-2007, the latter also includes vessels above 10m. The estimated total effort for vessels below 10m has fluctuated between 468000 and 330000 kW*days, with a clear decreasing trend since 2005. In 2007 the effort of these vessels constituted 10% of the total nominal effort in Kattegat. A much larger (also releative) decrease in nominal effort (around 45%) is also seen for the larger vessels (> 10 m). The majority of Danish effort data of vessels below 10m, 81% of the trips in 2007, could not be specified to gear category. The largest share of trips allocated to a specified gear was reported for gillnets, 9% of the effort in 2007 (Table 6.7.2.2).

Table 6.7.2.1. Danish landings (t) by vessels less than 10m in Kattegat, 2003-2007.

Sum of landing		gear							
species	Year	-1	DEM_SEINE	DREDGE	GILL	LONGLINE	OTTER	TRAMMEL	Grand Total
COD	2003	198.4			27.2	1.0	2.1	0.0	228.8
	2004	128.7			7.0			0.2	135.9
	2005	109.2			12.6	0.4	0.6	0.8	123.6
	2006	75.8			29.5	2.6	4.8	1.7	114.5
	2007	46.5	0.4		12.0	0.7	3.5	0.7	63.8
PLE	2003	266.9			5.9		0.0	6.1	279.0
	2004	258.7			7.2			1.0	266.9
	2005	185.1			14.9		0.3	6.0	206.3
	2006	208.5			22.4	0.0	4.2	13.4	248.5
	2007	194.1			22.1	0.0	14.4	8.8	239.4
SOL	2003	51.1			1.1		0.0	0.4	52.6
	2004	74.0			2.0			0.1	76.0
	2005	179.4			19.6		0.8	3.4	203.3
	2006	139.8			21.2	0.0	2.9	5.1	169.0
	2007	66.9		0.0	5.5	0.1	3.9	2.6	79.0

Table 6.7.2.2. Danish nominal effort in kW*days for vessels below 10m in Kattegat.

Sum of nominal_effort	gear							
Year	DEM_SEINE	DREDGE	GILL	LONGLINE	unspecified	OTTER	TRAMMEL	Grand Total
2000		191	31610	614	427097	1956	6531	467999
2001			21321	1708	369965	1524	3442	397959
2002	63	353	21552		368041	1214	1324	392547
2003			20682	58	400004	453	4060	425257
2004			12317		375850		1147	389314
2005	15		30942	162	372084	6600	7270	417072
2006		50	46019	669	315427	18562	12596	393324
2007	15	37	30681	265	270844	21691	7108	330640
Grand Total	93	631	215124	3476	2899312	51999	43478	3214113

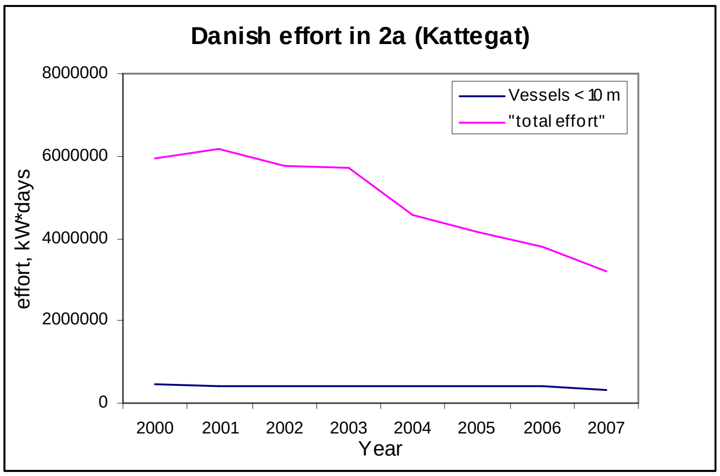


Figure 6.7.2.1. Total Danish nominal effort in kW*days in Kattegat for vessels over 10m and below 10m 2000-2007.

Sweden

For a description of data available on vessels under 10m length from Sweden see sections 5.5.2-5.5.4. Effort data by gear type was compiled in the same way as for vessels greater than 10m in length. The results for area 2a (Kattegat) are shown in Table 6.7.2.3.

Data on landings was also compiled in the same way as for vessels larger than 10m. Landings of cod, Nephrops and plaice for area 2a (Kattegat) is given in Table 6.7.2.4

Swedish effort by vessels <10m contributed to a low proportion of total Swedish effort in the Kattegat (2-4% annually). However, in terms of total landings the proportion fished by vessels

<10m is significant for plaice and sole (15-20% of Swedish quota for plaice and >50% of sole quota) taken by gillnetters.

Table 6.7.2.3. Area 2a (Kattegat); nominal effort (kW*days) of Swedish vessels under 10m by gear type 2000-2007.

Summa a	GEAR								
YEAR	-1	DEM_SEINE	GILL	LONGLINE	OTTER	PEL_SEINE	POTS	Totalt	% of SWE effort
2000	85		19158	829	13029		7071	40171	1,9%
2001	136	794	11846	1771	15067		6697	36310	1,6%
2002			11232	1577	10750		8392	31951	1,8%
2003			6629	2662	12658		8757	30707	1,7%
2004			7862	879	6206		10011	24958	1,7%
2005	185		11452	3651	9617		13180	38085	2,6%
2006		0	18225	2882	9087	0	33804	63998	3,8%
2007			15774	6088	12547		13818	48226	2,8%
Totalt	406	794	102178	20339	88961	0	101729	314407	2,2%

Table 6.7.2.4. Area 2a (Kattegat); landings (t) of cod, hake, *Nephrops*, plaice and sole by Swedish vessels under 10m by gear type 2003-2007.

SPECIES	YEAR	GILL	LONGLINE	OTTER	POTS	Sum
COD	2003	13,3	0,3	0,7	0,3	14,6
	2004	6,7	0,5	1,0	0	8,3
	2005	11,2	1,5	0,5	0,1	13,3
	2006	9,5	3,6	0,4	0,1	13,7
	2007	8,7	6,9	0,1	0,1	15,8
HKE	2003					0
	2004					0
	2005			0		0
	2006					0
	2007	0	1,2			1,2
NEP	2003	0		3,0	2,9	5,8
	2004	0		1,6	3,9	5,5
	2005	0		2,2	4,0	6,2
	2006	0		2,0	4,4	6,4
	2007	0		4,9	4,5	9,5
PLE	2003	13,8		2,3		16,1
	2004	15,8		0,2		16,0
	2005	15,8		0,1		15,9
	2006	20,8		0,1		20,8
	2007	25,4				25,4
SOL	2003	0,1				0,1
	2004	0,1				0,1
	2005	5,0		0	0	5,1
	2006	7,1		0	0,1	7,2
	2007	10,1		0	0,1	10,26

6.7.3. Vessels <10m in management area 2b: Skaggerak, North Sea and Eastern Channel

Data on estimated landings of cod, plaice and sole by vessels under 10m in length fishing in regulated area 2b were provided by Denmark, France, Germany, UK (England, Wales & Northern Ireland) and UK (Scotland). The data are summarised in the tables below. Effort data in terms of number of vessels is provided by Germany and in terms of kW*days by UK-Scotland and listed in the respective tables.

Denmark

Table 6.7.3.1. Estimated landings (t) of cod, plaice and sole by vessels under 10 metres in length, Denmark, Skagerrak, 2003-2006.

Sum of Sum Of landing		gear							
species	Year	Undefined	DEM_SEINE	DREDGE	GILL	LONGLINE	OTTER	TRAMMEL	Grand Total
COD	2003	606.9			38.5	0.3	2.1		647.8
	2004	661.9	0.2		54.0	0.6	1.6		718.2
	2005	634.9			153.7	5.3	11.8	2.4	808.1
	2006	392.4		0.5	214.9	8.8	21.2	3.9	641.7
PLE	2003	381.3			35.7	0.0	17.8		434.8
	2004	358.6			33.9		8.5		401.0
	2005	337.7			57.3	0.0	42.6	1.7	439.3
	2006	360.9		0.0	115.3	0.6	100.0	1.5	578.3
SOL	2003	6.6			0.4		0.1		7.1
	2004	18.3			1.9		0.1		20.2
	2005	6.9			10.2		0.4	0.0	17.6
	2006	3.2			1.5		2.3	0.0	7.0

Table 6.7.3.2. Estimated landings (t) of cod, plaice and sole by vessels under ten metres in length, Denmark, North Sea, 2003-3006.

Sum of Sum Of landing		gear							
species	Year	Undefined	DEM_SEINE	DREDGE	GILL	LONGLINE	OTTER	TRAMMEL	Grand Total
COD	2003	307.0			50.4	11.5	0.7	0.5	370.1
	2004	588.9			167.7	10.8	5.7	1.9	775.0
	2005	354.4		0.1	322.2	33.7	10.8	2.7	723.9
	2006	233.3		0.7	423.6	43.8	15.8	3.7	720.7
PLE	2003	360.4			72.1	0.1	19.8	1.9	454.2
	2004	304.5			42.0	0.0	13.2	4.0	363.7
	2005	287.0			84.7	0.1	24.6	6.5	402.8
	2006	223.9		0.0	112.4	0.4	56.4	18.9	412.1
SOL	2003	9.3			0.2	0.0	0.2	0.0	9.7
	2004	27.1			1.0		0.1	0.1	28.3
	2005	35.0			11.4		0.2	0.3	46.8
	2006	22.2		0.0	4.6	0.0	0.3	0.4	27.5

Germany

Access of the German boats <10m to the resources is granted by the fishing licensing. Licenses are granted by the national German control and enforcement institute (Bundesamt für Landwirtschaft und Ernährung, www.ble.de) through the fisheries offices of the federal states of Germany, i.e. Mecklenburg-Vorpommern and Schleswig-Holstein for the Baltic Sea and Schleswig-Holstein, Hamburg and Niedersachsen for the North Sea (German Bight). The licenses are granted for certain periods. Quotas of all boats <10m are based on a constant proportion of the national quota (about 9% of Baltic cod). Individual and joint quotas of the artisanal fisheries are distributed based on historical fishing activities.

Effort: The small boats are not obliged to report logbooks but to do landings declarations, which quantify landed quantities by species in kg. In addition, these landing declarations do provide information of landing ports, dates, gear types but not mesh sizes used. No precise effort measures are available as the recorded cruise information of vessels <10m often cover monthly periods rather than exact departure and return dates. The fishing effort is deployed depending on various factors, including weather conditions. Table 6.9.2.3 lists the number of vessels engaged in the German small-scale fisheries in the Baltic and the German Bight of the North Sea by gear types. The great majority (95%) of the boats are fishing in the Baltic. The number of small vessels fishing in the German Bight of the North Sea decreased from 53 in 2004 to 41 in 2006. In the Baltic, the boats almost exclusively use gillnets. Gillnets also represent the dominant gear type used by the few small boats in the North Sea (50%), but one third of the these small boats deploy beam trawls. However, the exact number of boats given in Table 1 should be interpreted with care as individual boats may have used more than one gear type during a given year and thus be multiple counted. This may concern especially static gear types.

Table 6.7.3.3 Number of German vessels with landing declarations by area and gear type, 2003-2006.

Landings: Table 6.7.3.4 lists the landings of the small boats by area, year, gear and species. The low cod, plaice and sole landings in 2004-2006 taken by the listed gears in the German Bight appear negligible. Brown shrimp (*Crangon crangon*) caught by beam trawls and dredges is the main target species. The reported landings of brown shrimp varied among 27 and 57 t. The few boats also land about 4 t of eels per year. Contrarily, the much higher effort deployed in the Baltic results in significant landings of cod, eel, flounder, perch, herring, plaice and whiting (Table 6.7.3.4.)

Table 6.7.3.4 Average landings (kg) of German vessels <10m by area, year, gear type and species, 2004-2006.

[redacted]

Sampling plan: Given the relatively low landings of regulated species/stocks and the limited effort in terms of boats fishing in the German bight in the North Sea (Division 4B), no specific sampling plans to monitor the discards and biological parameters have been developed or implemented.

UK (England, Wales and Northern Ireland)

Table 6.7.3.5. Estimated landings (t) of cod, plaice and sole by vessels under ten metres in length, UK (England, Wales and Northern Ireland), North Sea, 2003-2006.

Sum of LANDINGS		GEAR							
SPECIES	YEAR	BEAM	DREDGE	GILL	LONGLINE	OTTER	POTS	TRAMMEL	Grand Total
COD	2003		1.0	182.8	285.9	19.4	16.8	24.2	530.2
	2004			61.7	165.0	19.9	14.9	13.5	275.0
	2005			23.1	74.7	28.6	10.4	24.1	160.9
	2006			56.6	61.5	89.4	10.4	35.8	253.7
PLE	2003		0.0	14.9	0.0	27.0		9.3	51.2
	2004		0.0	9.2	0.0	29.3		1.0	39.6
	2005		0.0	5.1	0.0	27.1	0.0	2.3	34.5
	2006		0.0	7.9		51.9	0.1	0.9	60.9
SOL	2003	4.1	0.0	53.0	0.5	73.2	9.7	55.7	196.3
	2004		0.0	45.6	0.1	95.3	0.0	53.6	194.6
	2005		0.0	26.7	0.6	95.1	0.0	93.5	216.0
	2006			74.1	0.5	121.1	0.0	43.1	238.8

Table 6.7.3.6. Estimated landings (t) of cod, plaice and sole by vessels under ten metres in length, UK (England, Wales and Northern Ireland), Eastern Channel. 2003-2006:

[redacted]

UK Scotland

For a description of data available on vessels under 10m length from UK (Scotland) see section 5.5.5. Effort data in kWdays could be compiled in the same way as for vessels greater than 10m in length. The results for area 2b2 (North Sea) are shown in Table 6.7.3.7.

Landings data was also compiled in the same way as for vessels greater than 10m in length. Landings for cod, plaice and sole as compiled for area 2b2 (North Sea) is given in Table 6.7.3.8. Effort is significant for the OTTER gear but seems to have peaked in 2002 before falling to its lowest value in the series by 2006. Greatest effort has been by vessels using POTS with effort in this category fairly constant over time. Landings of cod are recorded at 23 tonnes in 2003 (mainly caught by gill nets) but have since fallen to single figures. OTTER trawls catch the majority of plaice but apart from 2004 landings are roughly 10 tonnes a year. Landings of sole are minimal.

Table 6.7.3.7 Area 2b2 (North Sea); nominal effort (kWdays) of Scottish vessels under 10 metre by gear type, 2000-2006.

Sum of NOMINAL_EFFORT_KW	gear											
year	BEAM	DEM_SEINE	DREDGE	GILL	LONGLINE	OTHMOBILE	OTHPASSIV	OTTER	PEL_TRAWL	POTS	SHELLHAND	Grand Total
2000		108	36577	5844	110471			586565	247	1533804	125324	2398939
2001			35050	16843	68278		656	706812	95	1570010	104183	2501927
2002			57773	7568	65431			806915		1468869	112063	2518619
2003			69658	6570	68047	1602	48	673441	98	1328563	93963	2241990
2004	118		56673	2301	44959	3557	352	771401		1347400	79658	2306420
2005			93540	1921	44490	7231		619299		1242625	87776	2096882
2006			71872	376	33555	4006		553344		1805114	77127	2545393

Table 6.7.3.8 Area 2b2 (North Sea); landings (tonnes) of cod, plaice and sole by Scottish vessels under 10 metre by gear type, 2003-2006.

Sum of LANDINGS		GEAR					
SPECIES	YEAR	DREDGE	GILL	LONGLINE	OTTER	POTS	Grand Total
COD	2003		20.12	0.96	2.03	0.01	23.13
	2004	0.02	2.73	1.53	2.13	0.42	6.84
	2005		0.18	0.91	2.11	0.70	3.90
	2006		0.62	2.72	1.46	0.23	5.03
PLE	2003				6.01		6.01
	2004	4.25			54.73	0.01	58.98
	2005				11.41		11.41
	2006				9.86	0.20	10.05
SOL	2003				0.01		0.01
	2004				0.00		0.00
	2006				0.00		0.00

Overall landings by under 10m vessels in 2b

Table 6.7.3.9 summarises overall landings by under 10m vessels from the Skagerrak, North Sea, Eastern Channel. Results suggest that minimum estimates of landings of cod, plaice and sole by these vessels were all in excess of 1000 tonnes.

Table 6.7.3.9 Estimates of 2007 landings by under 10m vessels aggregated across countries supplying data

	Sweden	Denmark	Germany	Belgium	France	Scotland	E&W	Ireland	Spain	Portugal	Netherlands	Total
cod	22.3	840	0.02		73.4	5.7	486	0				1427.4
plaice	7.3	656	0.1		219.1	7.7	321	0				1211.2
sole	0.5	14	0		231.5	0.001	827	0				1073.0
hake	1.2	7	0		0.1	0.01	0.9	0				9.2
Nephrops	132.8	1	0		0	1103	687	0				1923.8

6.7.4. Vessels <10m in management area 2c: Irish Sea

Data on estimated landings of cod, plaice and sole by vessels under 10m in length fishing in the Irish Sea were provided by Ireland, UK (England, Wales & Northern Ireland) and UK (Scotland). The data are summarised in the tables below, followed by an international aggregation for 2007 landings. Effort data in terms of number of vessels are provided by UK-Scotland.

Ireland

Irish under 10 meter vessel landings are not recorded by gear type, therefore Table 6.7.4.1 represents landings by all gear types used by these vessels in the Irish Sea, however this information is known to be incomplete. No area specific vessel numbers or effort is available from Ireland, for further description of information provided by Ireland, see section 5.5.5.

Irish cod landings have been low since 2005, having previously been much higher in 2003 and 2004. Similar is true of hake, which since 2005 have no recorded landings by this fleet segment. *Nephrops* landings of around 1-2 t are recorded in several years, whilst landings in 2004 were far higher, no landings were reported in 2005. Landings of both plaice and sole have been low throughout the period, during 2007, combined this species totalled <1 t.

Table 6.7.4.1. Irish Sea. Landings of cod, plaice and sole by Irish under 10 meter vessels (ton), 2003-2007.

Species	2003	2004	2005	2006	2007
Cod	92.7	62.9		0.3	4.7
Plaice	8.5	10.7			0.3
Sole Black	5.3	2.1		0.0	0.1
Hake	36.1	24.3			
Nephrops	2.8	24.1		2.8	1.3
Total	145.5	124.1		3.1	6.3

UK England

In relation to UK England, landings for vessels under 10 meters are presented in Table 6.7.4.2 by gear type. No information is available on effort or vessel numbers for this segment of the fleet.

Table 6.7.4.2; Estimated landings (t) of cod, plaice and sole by UK(EWNI) vessels under 10m in length from the Irish Sea, 2003-2006.

		GEAR							
SPECIES	YEAR	BEAM	DREDGE	GILL	LONGLINE	OTTER	POTS	TRAMMEL	Total
COD	2003	0		0		4			4
	2004	0				5.1			5.1
	2005	0.3		2.2		3.6			6.2
	2006	0.1		2.3		6.1	0		8.6
PLE	2003	0		0.3		50			50.3
	2004	0.1		2.2		39.9			42.1
	2005	14.9		2.9		71.4			89.3
	2006	16.4		1.1		57.9			75.5
SOL	2003	0.8		0		2.9			3.7
	2004	1.1		0		1.3			2.4
	2005	7.9		0		1.2			9.1
	2006	9.1		0		2.4			11.5

UK Scotland

For a description of data available on vessels under 10m length from UK (Scotland) see section 5.5.5.

Effort data in kWdays could be compiled in the same way as for vessels greater than 10m in length. The results for area 2c (Irish Sea) are shown in Table 6.7.4.3.

Landings data was also compiled in the same way as for vessels greater than 10m in length. Landings for cod, plaice and sole as compiled for area 2c (Irish Sea) is given in Table 6.7.4.4. Effort is small for all types of gear and landings of cod, plaice and sole are very low.

Table 6.7.4.3. Area 2c (Irish Sea); nominal effort (kWdays)of Scottish vessels under 10 metre by gear type, 2000-2006.

Sum of NOMINAL_EFFORT_KW	gear				
year	DREDGE	GILL	OTTER	POTS	Grand Total
2000	11411		6248	308	17967
2001	7536		9565	1120	18220
2002	4272		2043	1092	7407
2003	5642		912	981	7534
2004		2163	2251	9310	13725
2005	597		2838	4682	8117
2006	3255		5709	33602	42565

Table 6.7.4.4. Scottish landings (tonnes) of cod, plaice and sole from under 10 metre vessels within the Irish Sea, by gear type.

Sum of LANDINGS		GEAR			
SPECIES	YEAR	GILL	OTTER	POTS	Grand Total
COD	2003		0.01		0.01
	2004	0.02			0.02
PLE	2003		0.07		0.07
	2004	0.02			0.02
	2005			0.02	0.02
SOL	2003		0.00		0.00
	2005			0.01	0.01

Overall summary for 2c

Within the Irish Sea landings of hake and *Nephrops* by the under 10 meter segment were minimal during 2007. Landings of cod and sole were also low, primarily landed by the UK (England and Wales). Plaice landings by this fleet segment however were far higher, >100 t, also primarily landed by the UK (England and Wales). Overall, contribution of the under 10 meter segment to cod, sole, hake and *Nephrops* is low, relative to total international landings (~1% or less). Landings of plaice by this segment however account for 13% of total plaice landings within the Irish Sea.

Table 6.7.4.5 Irish Sea. Summary of 2007 international landings for cod, plaice, sole, hake and *Nephrops* from under 10 meter vessels.

	Sweden	Denmark	Germany	Belgium	France	Scotland	E&W	Ireland	Spain	Portugal	Netherlands	Total
cod							6.8	4.7				11.5
plaice						0.02	105	0.3				105.3
sole							6.5	0.1				6.6
hake							0.4					0.4
Nephrops							0.4	1.3				1.7

6.7.5. Vessels <10m in management area 2d: West of Scotland

Activity by vessels <10m in area 2d (west of Scotland) was recorded by France, Ireland, UK(EWNI) and UK(Scotland). Descriptions of the type and quality of data available for assessing effort and landings of these vessels can be found in section 5.5.5.

For UK (Scotland) effort data in kW*days and landings data could be compiled in the same way as for vessels greater than 10m in length. The results for area 2d (west of Scotland) are shown in Tables 6.7.5.1. and 6.7.5.2. Overall effort has increased between 2000 and 2007 due to increasing effort using pots. From Table 6.7.5.2 however, it can be seen landings of cod, plaice and sole are low in all years from 2003. Approximately 2,200 tonnes of *Nephrops* are landed with pots taking slightly more than otter trawls.

Table 6.7.5.1 West of Scotland. Effort (kW*days) of Scottish vessels under 10 metres by gear type, 2000-2007

Sum of NOMINAL_EFFORT	YEAR							
GEAR	2000	2001	2002	2003	2004	2005	2006	2007
DREDGE	32327	56463	44476	83679	104656	67282	22776	31674
GILL	101	456	42			56	468	1800
LONGLINE	142	1692		25	160		271	241
OTHMOBILE								310
OTTER	371575	414593	335624	515418	475594	461009	527334	475203
PEL_TRAWL					475			
POTS	1605355	1828112	2247568	2668812	2668694	3039429	3638155	3564531
SHELLHAND	429123	320254	87647	106902	127779	122185	162708	120494
TRAMMEL								368
Grand Total	2438623	2621569	2715358	3374836	3377358	3689961	4351712	4194620

Table 6.7.5.2 West of Scotland. Landings (tonnes) of cod, plaice, sole, hake and *Nephrops* by Scottish vessels under 10 m by gear type, 2003-2007.

Sum of LANDINGS		YEAR				
SPECIES	GEAR	2003	2004	2005	2006	2007
COD	OTTER	2.14	0.73	0.38	0.77	1.63
	POTS	0.70	0.19			0.54
HKE	OTTER	0.18	0.63	0.39	0.40	
	POTS	0.41	0.11			
NEP	DREDGE	0.02	2.37		0.94	0.09
	GILL					0.08
	OTTER	585.34	555.43	556.09	1013.36	1049.71
	PEL_TRAWL		0.32			
	POTS	1143.62	1141.16	1136.67	1230.21	1219.30
	SHELLHAND	5.74	0.49			2.29
PLE	OTTER	0.05	0.05	0.05	0.51	0.07
	POTS	0.01				
SOL	OTTER			0.03		
	POTS		0.00			

Ireland

Irish under 10 meter vessel landings are not recorded by gear type. Therefore Table 6.7.5.3 represents landings by all gears types used by these vessels in the west of Scotland. This information is known to be incomplete, however. No area specific vessel numbers or effort is available from Ireland, for further description of information available from Ireland, see section 5.5.5.

Table 6.7.5.3. West of Scotland; landings of cod, plaice and sole (tonnes) by Irish under 10 meter vessels, 2003-2006.

	Year			
Species	2003	2004	2005	2006
COD	0.06	1.05		
PLE	8.96	2.07	3.20	1.74
SOL	1.89	0.81	0.03	
Total	10.92	3.93	3.22	1.74

UK England, Wales and Northern Ireland – UK(EWNI)

As can be seen from Table 6.7.5.4 virtually no landings of cod, plaice or sole are recorded as taken by UK(EWNI) vessels west of Scotland. For a description of data available on vessels under 10m length from UK (EWNI) see section 2.5.5.

Table 6.7.5.4. West of Scotland; estimated landings (tonnes) of cod, plaice and sole by UK(EWNI) vessels under 10m, 2003-2006.

Sum of LANDINGS		GEAR							
SPECIES	YEAR	BEAM	DREDGE	GILL	LONGLINE	OTTER	POTS	TRAMMEL	Grand Total
COD	2003								
	2004								
	2005					0.1			0.1
	2006								
PLE	2003								
	2004								
	2005					0.1			0.1
	2006								
SOL	2003								
	2004								
	2005								
	2006					0.1			0.1

Overall landings by under 10m in 2d

Table 6.7.5.5 summarises landings of cod, plaice, sole, hake and *Nephrops* from 2007. The only significant landings are those of *Nephrops* with the majority being taken by Scottish vessels.

Table 6.7.5.5 West of Scotland. Landings of cod, plaice, sole, hake and *Nephrops* (tonnes) by vessels under 10 meters in 2007.

	Sweden	Denmark	Germany	Belgium	France	Scotland	E&W	Ireland	Spain	Portugal	Netherlands	Total
cod					0	2.2	0.02	0				2.22
plaice					0	0.07	0	0.9				0.97
sole					0	0	0.02	0				0.02
hake					0	0	0.01	0				0.01
Nephrops					0	2271.5	43.6	0				2315.10

6.8. Significance of unregulated and under 10m vessel landings in the context of regulated gear landings

6.8.1. Significance of Unregulated Gears and Vessels <10m in management area 2a: Kattegat

Table 6.8.1.1 Kattegat. Landings of cod, plaice and sole (tonnes) in 2007 by vessels < 10m and by unregulated gears compared to overall landings recorded in the area.

	Cod	Plaice	Sole
Total landings in area	507	1315	372
Total landings from vessels < 10m	80	264	89
Total landings (unregulated)	34	202	71

6.8.2. Significance of Unregulated Gears and Vessels <10m in management area 2b: Skaggerak, North Sea and Eastern Channel

Table 6.8.2.1 Skaggerak, North Sea and Eastern Channel. Landings of cod, plaice and sole (tonnes) in 2007 by vessels < 10m and by unregulated gears compared to overall landings (tonnes) recorded in the area.

	Cod	Plaice	Sole
Total landings in area	20896	51473	17789
Total landings from vessels < 10m	1427	1211	1073
Total landings (unregulated)	1221	1799	637

6.8.3. Significance of Unregulated Gears and Vessels <10m in management area 2c: Irish Sea

Table 6.8.3.1 Irish Sea. Landings of cod, plaice and sole (tonnes) in 2007 by vessels < 10m and by unregulated gears compared to overall landings recorded in the area.

	Cod	Plaice	Sole
Total landings in area	1211	709	478
Total landings from vessels < 10m	12	105	7
Total landings (unregulated)	23	45	57

6.8.4. Significance of Unregulated Gears and Vessels <10m in management area 2d: West of Scotland

Section 6.6.5 showed that the majority of unregulated effort by vessels > 10m involved use of dredges or deployment of pots. The section also showed how the unregulated gears landed very small quantities of cod, plaice and sole. Although it must be borne in mind that information is not available about discards from these gears it is probable their significance in terms of catch of cod, plaice and sole is low.

Section 6.7.5 outlined available information on landings by vessels < 10m west of Scotland. Again recorded landings of cod, plaice and sole are very low and the same conclusion of low significance in terms of catch of cod, plaice and sole applies. Analysis of < 10 m vessels also considered landings of hake and *Nephrops*. *Nephrops* was found to be the only species landed in any significant quantities, much of this comes from the creel fishery operating on the west coast.

Table 6.8.4.1 West of Scotland. Landings of cod, plaice and sole (tonnes) in 2007 by vessels < 10m and by unregulated gears compared to overall landings recorded in the area.

	Cod	Plaice	Sole
Total landings in area	446	78	22
Total landings from vessels < 10m	2	1	0
Total landings (unregulated)	0	0	0

6.9. *Spatial distribution patterns of effective fishing effort of trawled gears 2003-2007*

6.9.1. General remarks

STECF-SGRST notes that minimum geographic resolution in the available logbook information on landings and effective effort is by ICES rectangle and considers analyses to only be possible at that resolution. However, in order to evaluate the geographical distribution patterns of various fleets using specific gears on a larger scale, STECF-SGRST defined an additional data base for effective effort of the various trawled gears (beam and otter trawls, demersal seines) defined as derogations in Annex IIA and called for the data in advance of its follow-up meeting. The data base C on effective effort is defined in Annex 1 to this report and an overview on data provisions is given in section 5.5.3 in this report. The effective effort values of certain nations were given in days fished which were then converted to trawled hours by applying a factor of 24. STECF-SGRST notes that only major changes in the geographical distribution patterns should be given attention given the imprecision of the created data set. Furthermore, only few examples of derogations are presented because of the time and space limits given to STECF-SGRST. A full set of figures is availabale electronically

STECF-SGRST notes a general trend to deploy the available effort closer to the landing ports can only be detected for the beam trawl fleet. In general, it remains unclear whether the observed patterns are due to abundance changes of target stocks, economic considerations or effort regulations.

Figures use a common scale across years for a given category (e.g. 4.a.ii. none) but scales are unique to each category such that the colours assigned to statistical rectangles for category 4.a.ii. none can not be compared directly to those assigned for category 4.a.ii.IIA8d say. Figures use a percentiles scale, i.e. the same number of data values found in each colour band is the same. This is after data values across all years have been combined for that category.

6.9.2. Spatial Distribution of Effective Effort in management area 2a: Kattegat

Maps of effort for area 2a concentrate on those categories identified as significant in terms of recorded effort (see section 6.2.2) and in terms of landings of cod (see section 6.3.2). The spatial graphs are however not limited to the few rectangles in area 2a alone. Instead, a broader approach was chosen in which effort data for important gear in the Kattegat (and Skagerrak) are shown over the whole area (North Sea, Skagerrak, eastern channel and the Kattegat). This approach was chosen in order put the Kattegat (and Skagerrak) spatial trends in a broader perspective and to visualise differences and similarities in fishing patterns over a larger area.

4.a.ii none- Maps shows the sudden disappearance of 70-89mm trawls in Kattegat and Skagerrak in 2005. This moved effort to grid trawls (4.a.ii.IIA81b) and to 4.a.iii. trawls.

4.a.ii.IIA81b – Clearly shows the uptake and evolution of the Nephrops grid in 70-89mm trawls which was introduced in 2004. Effort is concentrated along the West of Sweden in the Kattegat and Skagerrak.

4.a.iii none – No spatio-temporal pattern is discernible. This derogation dominates regulated effort in the Kattegat and Skagerrak in all years.

4.a.iii.IIA81a– Clearly shows the uptake and evolution of the Danish 120mm panel which was introduced in 2005. Effort is concentrated in the Kattegat and Skagerrak as a result of that the gear has only been taken up by Danish and Swedish vessels.

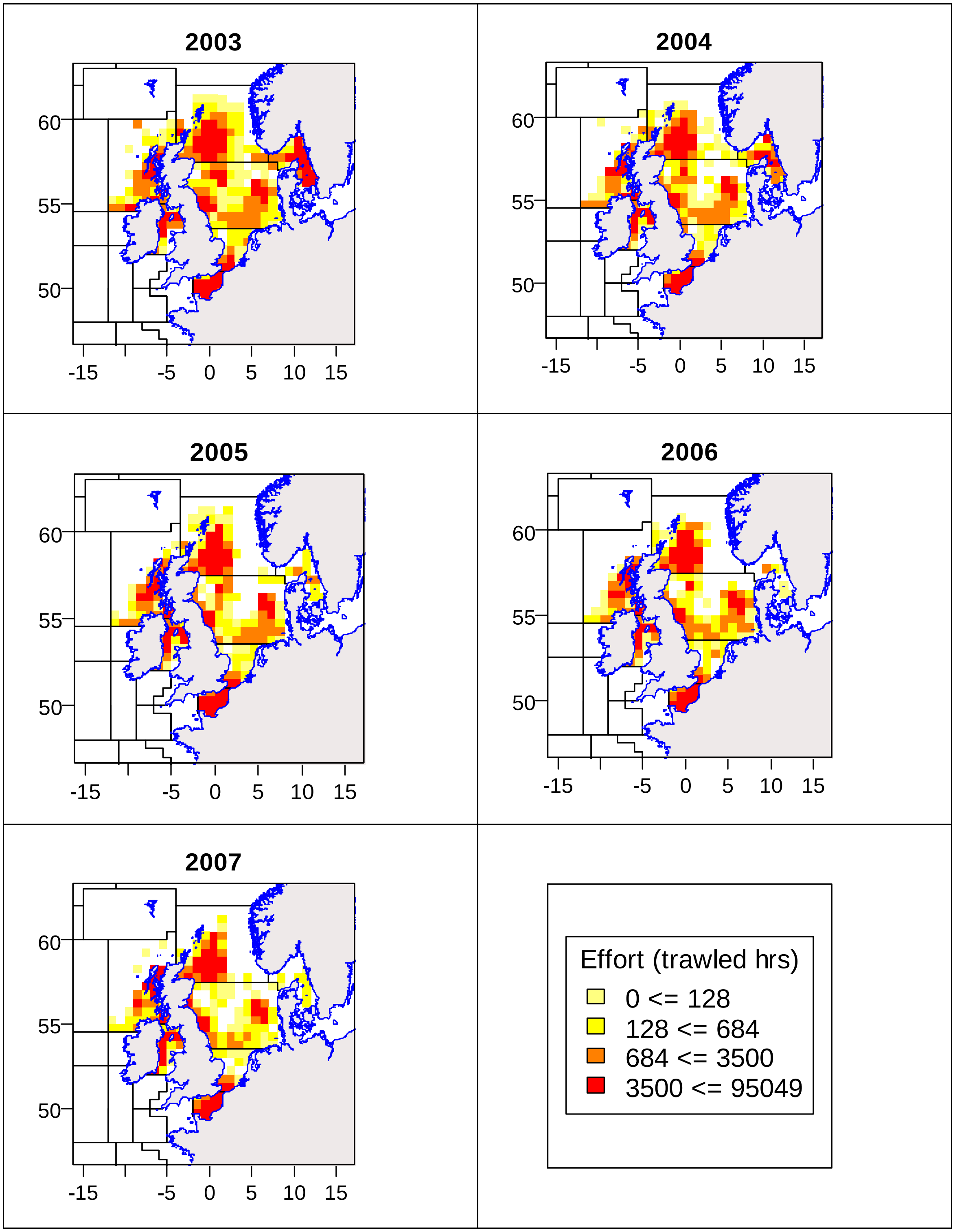


Figure 6.9.2.1 Kattegat. Effort (trawled hours) by ICES statistical rectangle for 4.a.ii.none, 2003-2007.

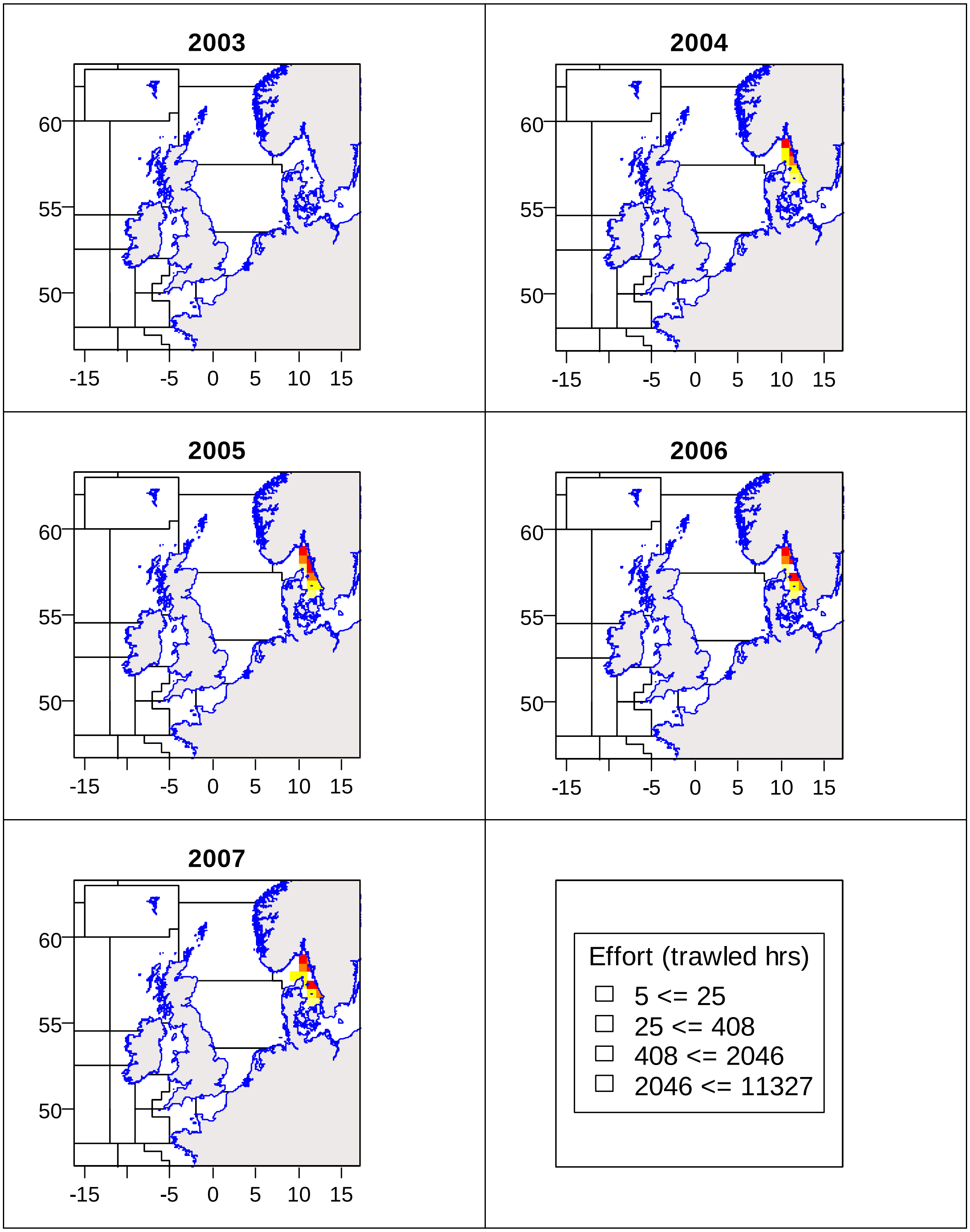


Figure 6.9.2.2 Kattegat. Effort (trawled hours) by ICES statistical rectangle for 4.a.ii IIA8b, 2003-2007.

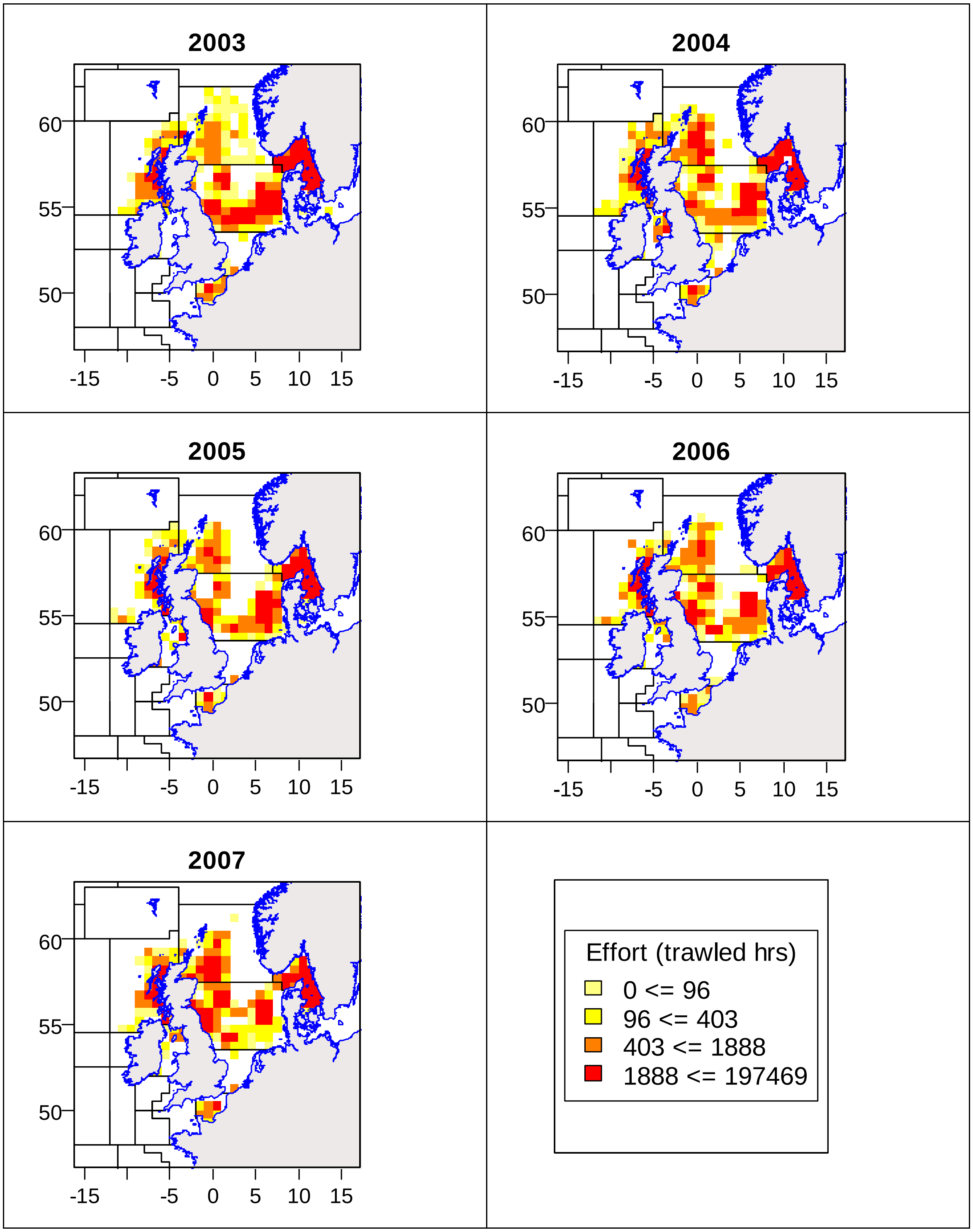


Figure 6.9.2.3 Kattegat. Effort (trawled hours) by ICES statistical rectangle for 4.a.iii none, 2003-2007.

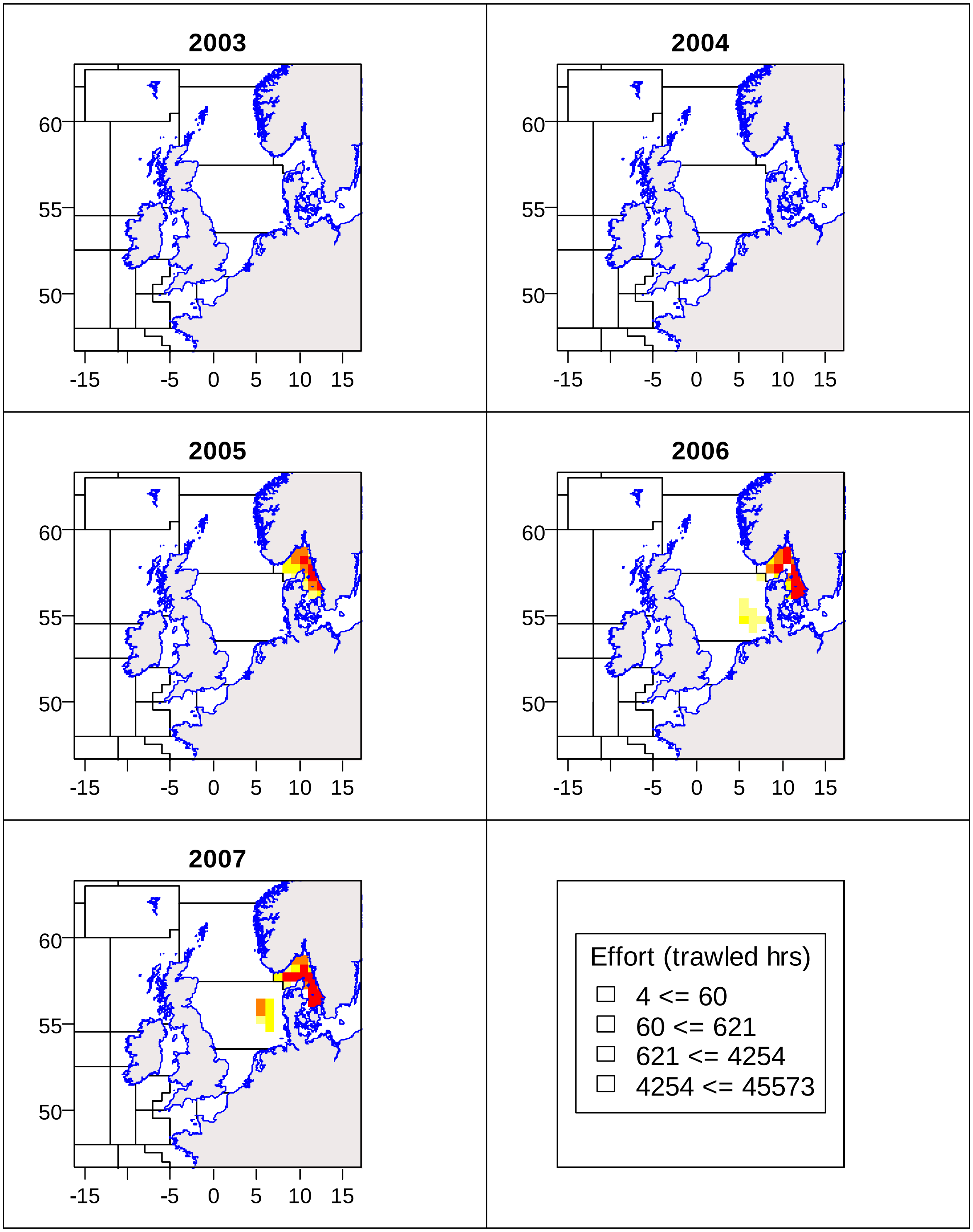


Figure 6.9.2.4 Kattegat. Effort (trawled hours) by ICES statistical rectangle for 4.a.iii IIA8a, 2003-2007.

6.9.3. Spatial Distribution of Effective Effort in management area 2b:North Sea, Skagerrak & Eastern Channel

Figures 6.9.3.1-6.9.3.6 show spatial distribution of effort for the six gear categories identified as being the most important in terms of cod catch in 2007. The gear categories include 4bi, beam trawls with 80-89mm mesh, which is also the major gear for plaice and sole.

Otter trawls with 120+mm mesh (4av, no special conditions, Figure 6.9.3.1) are the main roundfish gear and are mainly used in the Northern North Sea, particularly east of Shetland and along the edge of the Norwegian deeps. There are no obvious changes in distribution of effort over 2003-2007.

Beam trawls with 80-89mm mesh are the main flatfish gear, and their use is centred on the Southern North Sea (Figure 6.9.3.2). There are indications of a southward contraction in the distribution of effort by this gear over 2003-2007. As this gear is not subject to days-at-sea limitations in the North Sea or Eastern channel, this apparent change in distribution is unlikely to be an effect of management actions.

The distribution of effort by otter trawls with 80-89mm mesh (4aii) are shown in Figure 6.9.3.3, with the effort by vessels using the same gear which are eligible for a track record derogation (4aii, IIA8d) shown in Figure 6.9.3.4. The latter dataset show a general absence of effort from the Eastern North Sea. It is not clear whether this is a real effect, or just an artefact due to differences in how different nation's vessels have been allocated to special conditions. In both cases, the effort is patchy, being associated with Nephrops grounds in the Northern North Sea, and with a whiting fishery in the Eastern Channel & Southern North Sea. The dataset also show a drastic effort reduction for 4aii none in the Skagerrak and Kattegat since 2004. This is most likely an effect of banning 70-89mm trawls without a sorting grid in this area in 2005.

The distribution of effort by otter trawls with 90-99mm mesh (4aiii, no special condition, Figure 6.9.3.5) in the North Sea is similar to that of the preceding gear as some UK vessels use this gear to target Nephrops. It is also the main gear in use in the Skagerrak, hence the concentration in that area.

Gillnets with mesh sizes 150-219mm (gear 4ciii, Figure 6.9.3.6) are mainly used in a fairly localised area in the central and southern North Sea. There are some indications that this area has contracted in recent years.

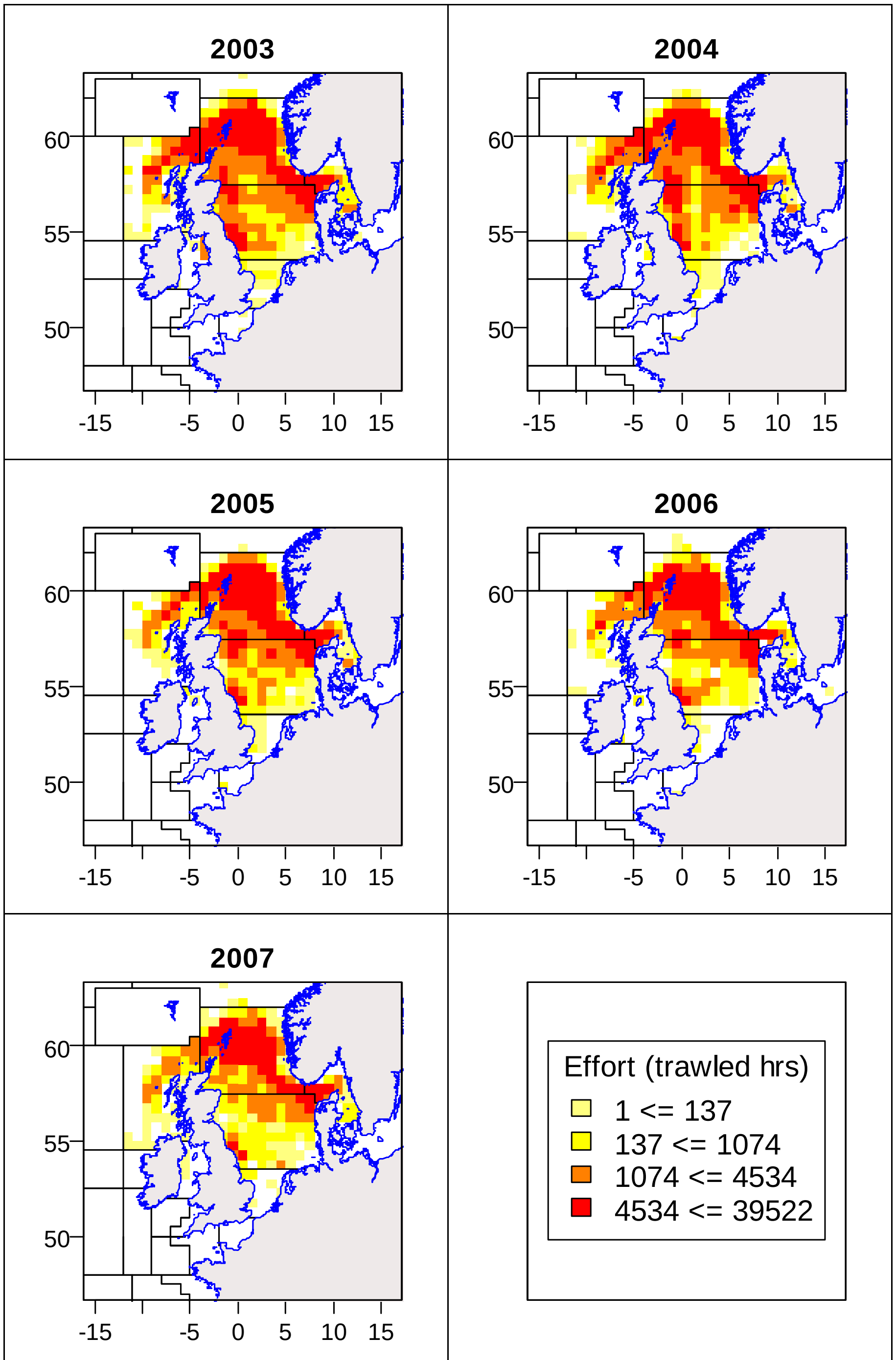


Figure 6.9.3.1, 4av none

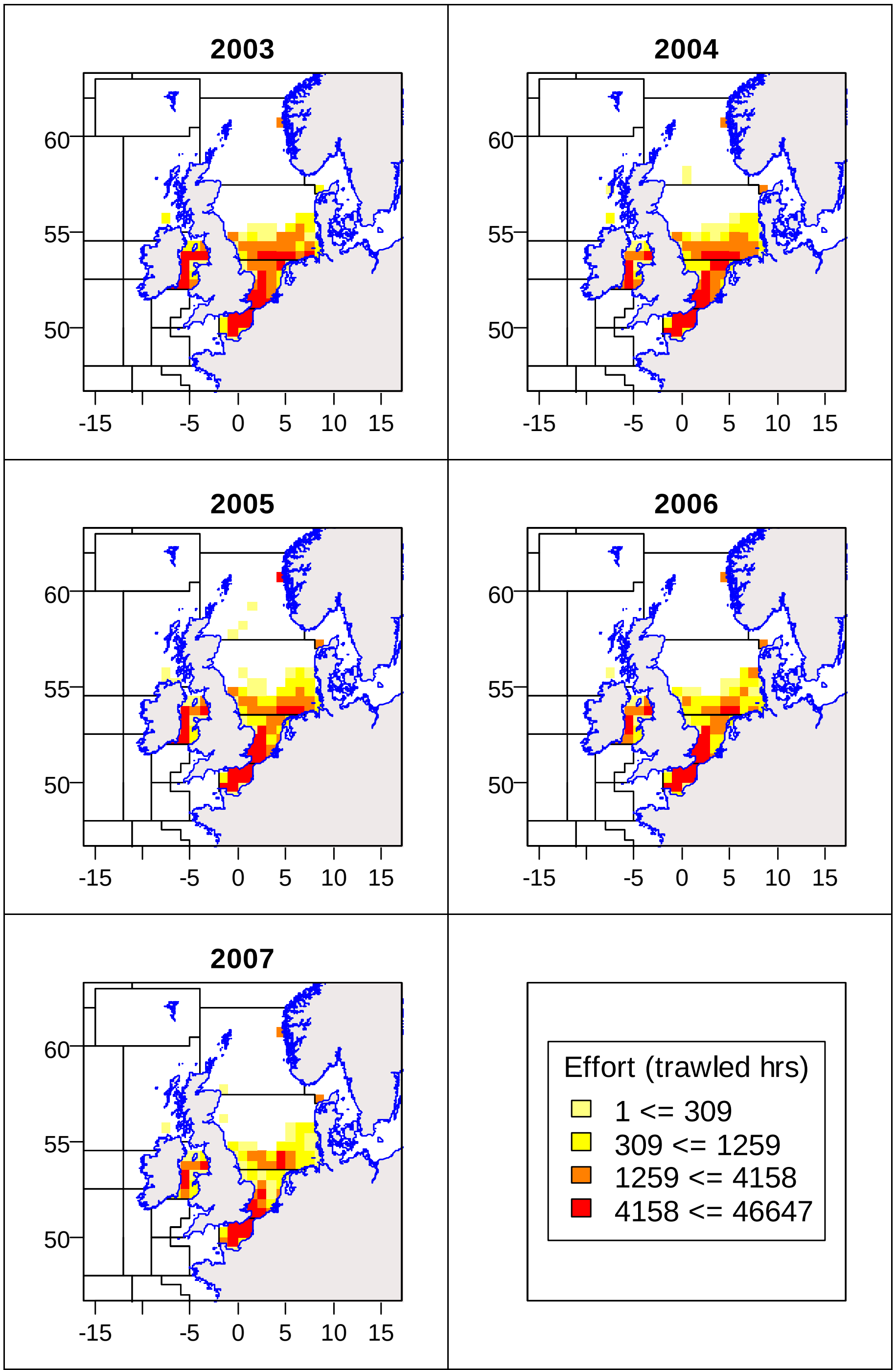


Figure 6.9.3.2, 4bi none

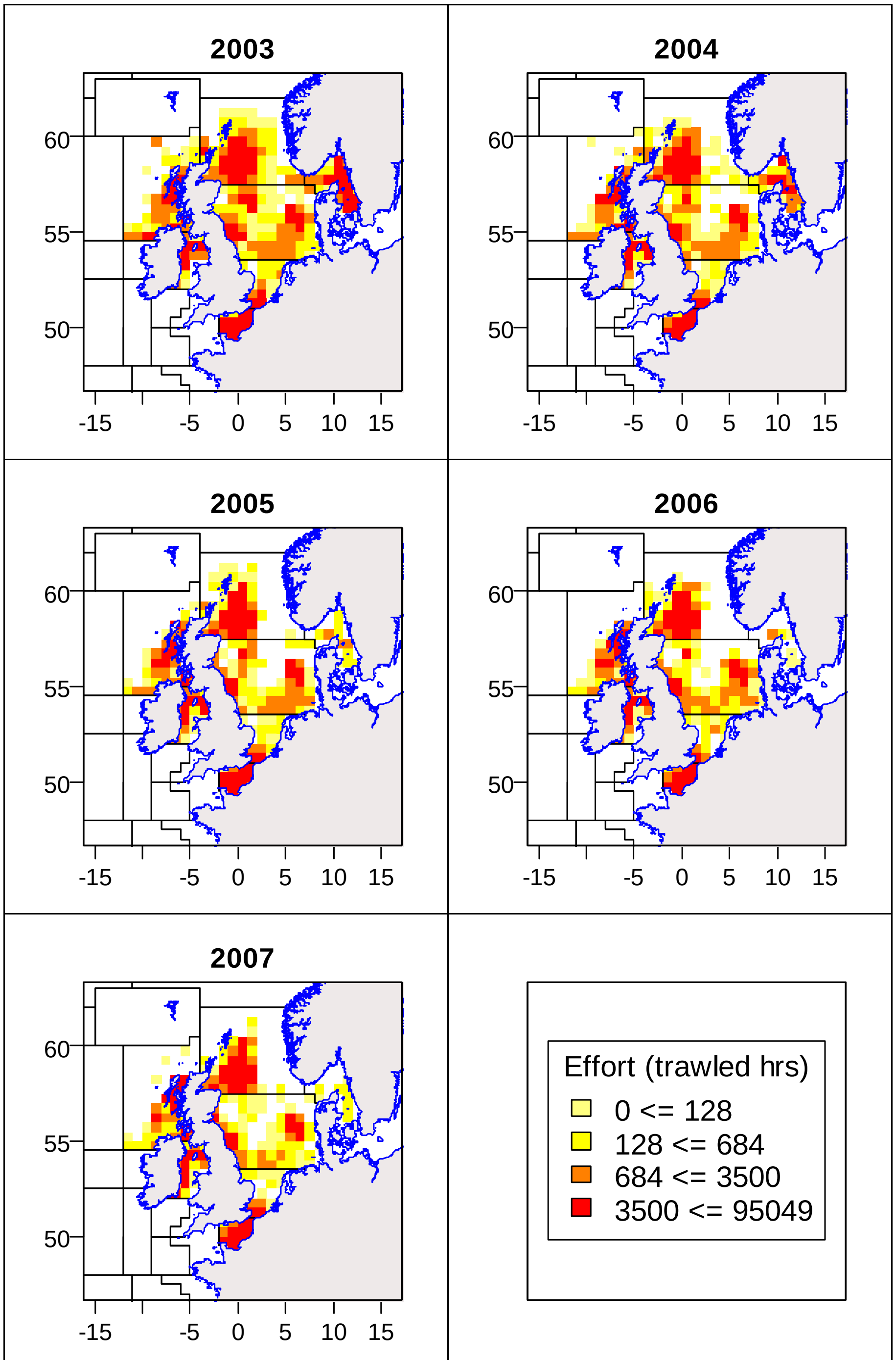


Figure 6.9.3.3, 4aii none

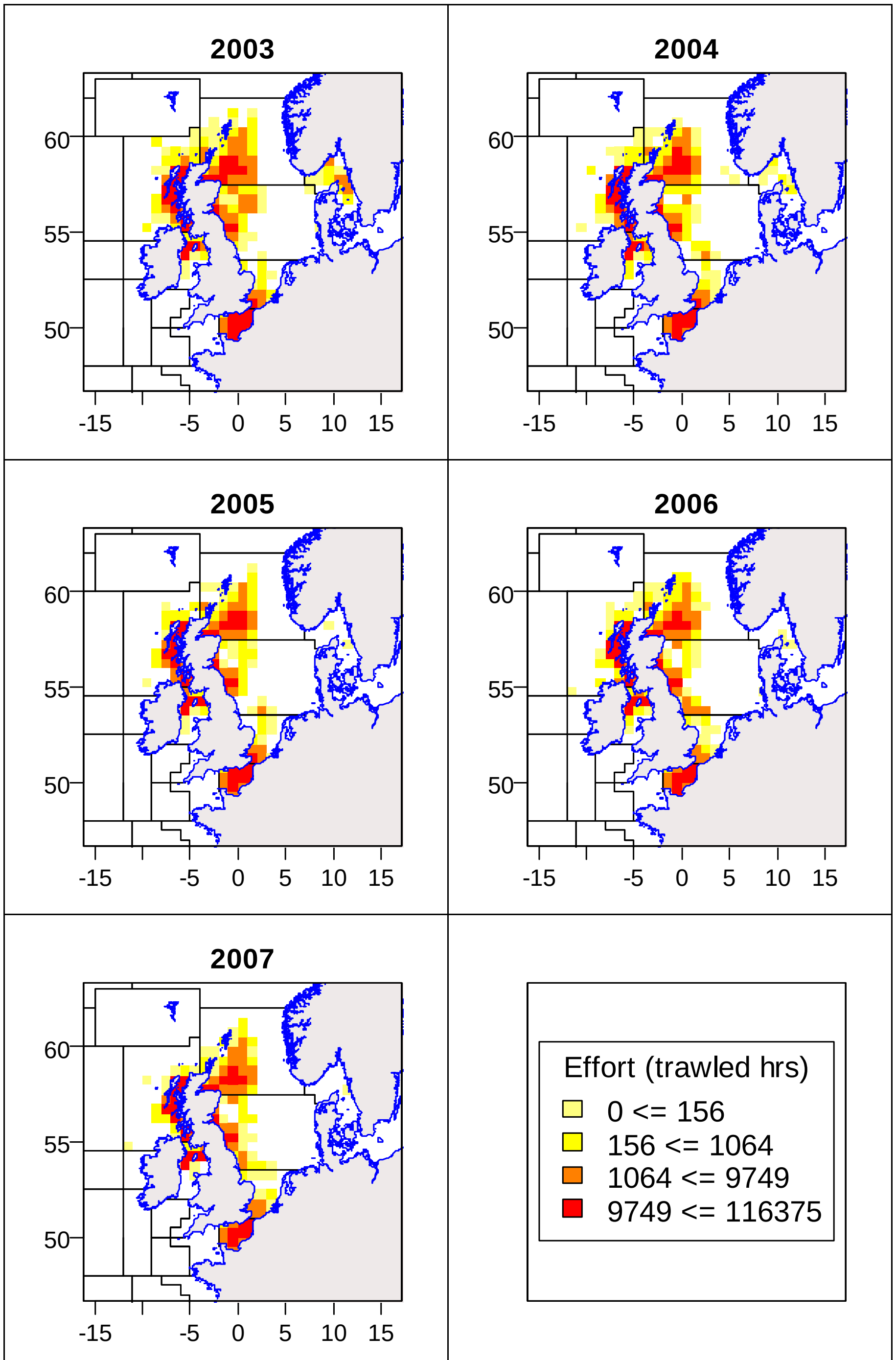


Figure 6.9.3.4 4aii IIA8d

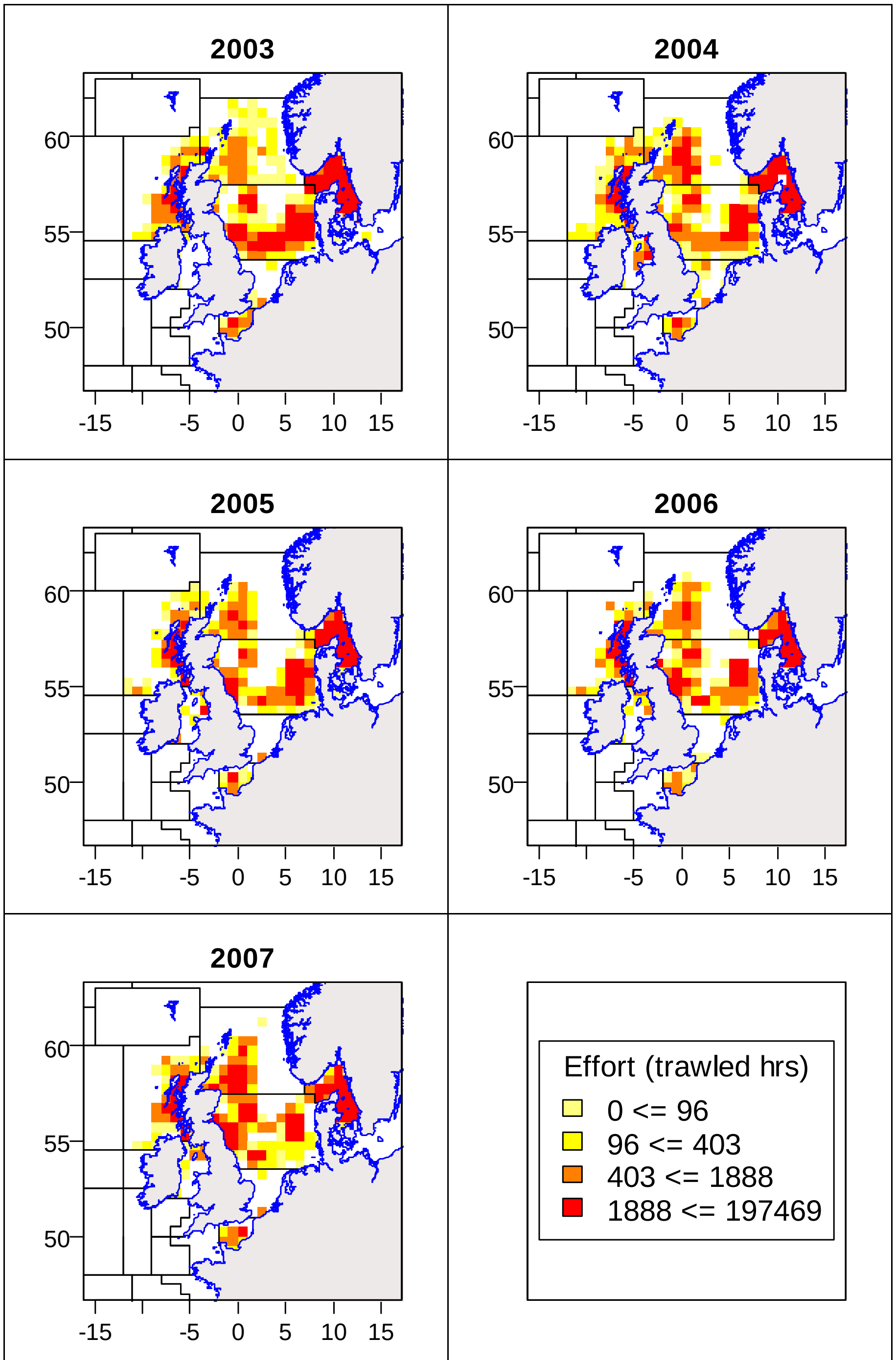


Figure 6.9.3.5, 4aiii none

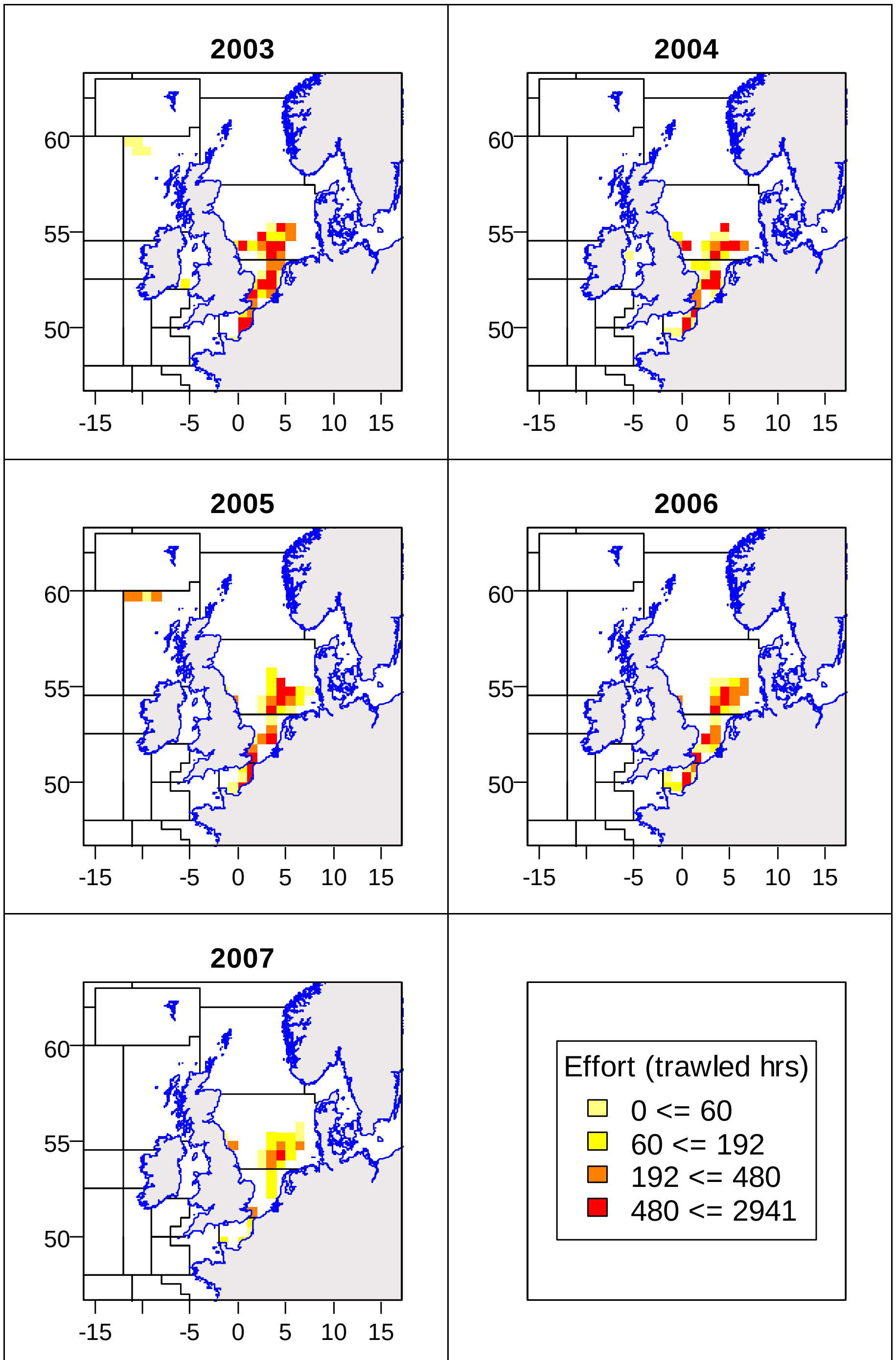


Figure 6.9.3.6, 4ciii none

6.9.4. Spatial distribution patterns of effective fishing effort of trawled gears in management area 2c: Irish Sea

Spatial figures of effort for the Irish Sea concentrate on those categories identified as significant in terms of recorded effort (Section 6.2.4) and in terms of cod, plaice and sole catches (Section 6.5.3).

Figures use a common scale across years for a given category (e.g. 4.a.ii. none) but scales are unique to each category such that the colours assigned to statistical rectangles for category 4.a.ii. none can not be compared directly to those assigned for category 4.a.ii.IIA8d say. Figures use a percentiles scale, i.e. the same number of data values found in each colour band is the same. This is after data values across all years have been combined for that category.

4.a.ii.none: The highest effort values occur along the west of the Irish Sea, across in line with the Isle of Man, and down the eastern edge above Wales. Over time effort has increased in the southern Irish Sea, including greater effort in Welsh coastal rectangles.

4.a.ii IIA.8.d: Effort within this special condition of the above gear category is focused in the northern areas, with no effort within the southern extreme. The time series shows increased focus to the north, with decreasing effort in the mid Irish Sea.

4.a.ii IIA.8.c: This special condition contains relatively little effort in comparison to either of the above. Effort is again distributed in northern areas, decreasing over time with effort focused closer to north-east and north-west coastal areas.

4.a.iv none: The highest effort within this category primarily ran along the coast of Ireland and northern areas of the Irish Sea. This effort has declined and become focused with less intensity along the coast of Ireland, with little or no effort to the east.

4.a.iv.IIA8d: Effort within this special condition is lower than the above category, although demonstrated a similar pattern in distribution and intensity. This effort has become more north-westerly, with the exception of the southern most rectangles likely to be linked to fisheries within VIIg.

4b.i none: The effort pattern within this category covers the majority of the Irish Sea. Over time effort has declined, although the general distribution of the highest intensity remains similar.

None none: Effort unassigned to a regulated gear covers the majority of the Irish Sea, with the lowest intensity within the southern areas. Over time there has been little change in distribution of effort. Much of this relates to unregulated gears, including pots which occur across much of the coastal Irish Sea and dredges which specialise in set areas dependent on species.

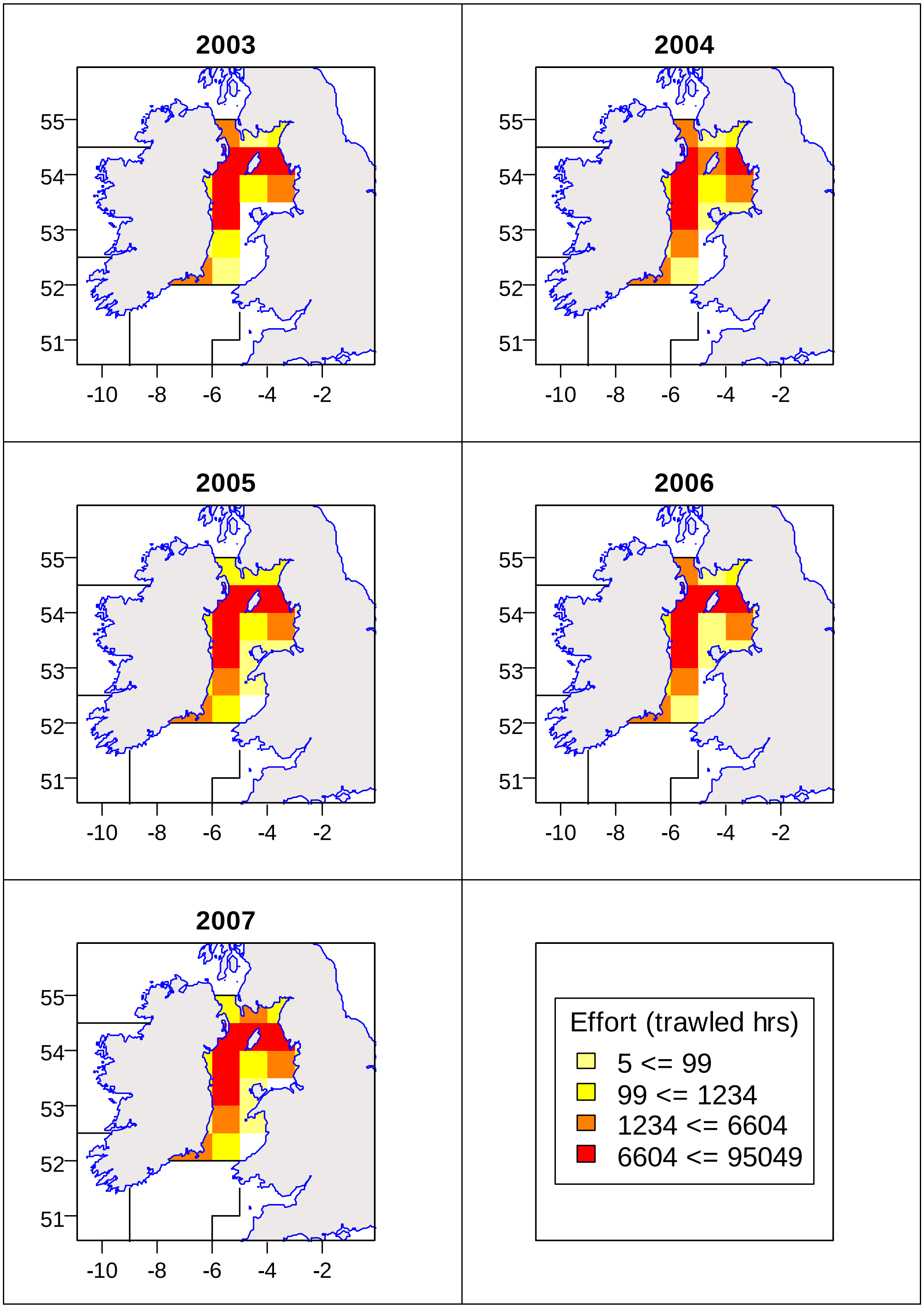


Figure 6.9.4.1. Irish Sea. Spatial distribution of effort (trawled hours) by ICES statistical rectangle for 4a.ii none, 2003-2007.

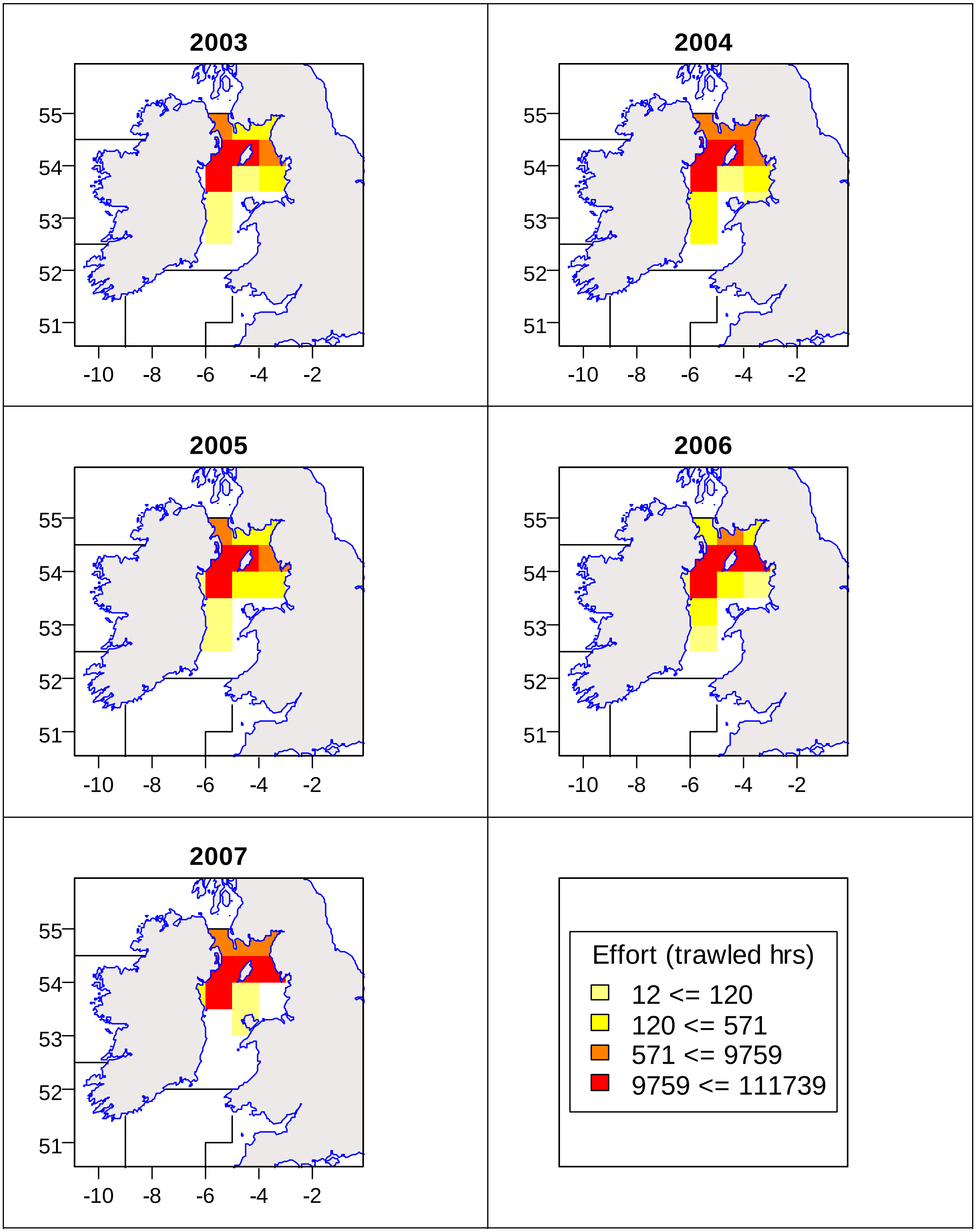


Figure 6.9.4.2. Irish Sea. Spatial distribution of effort (trawled hours) by ICES statistical rectangle for 4a.ii IIA.8.d, 2003-2007.

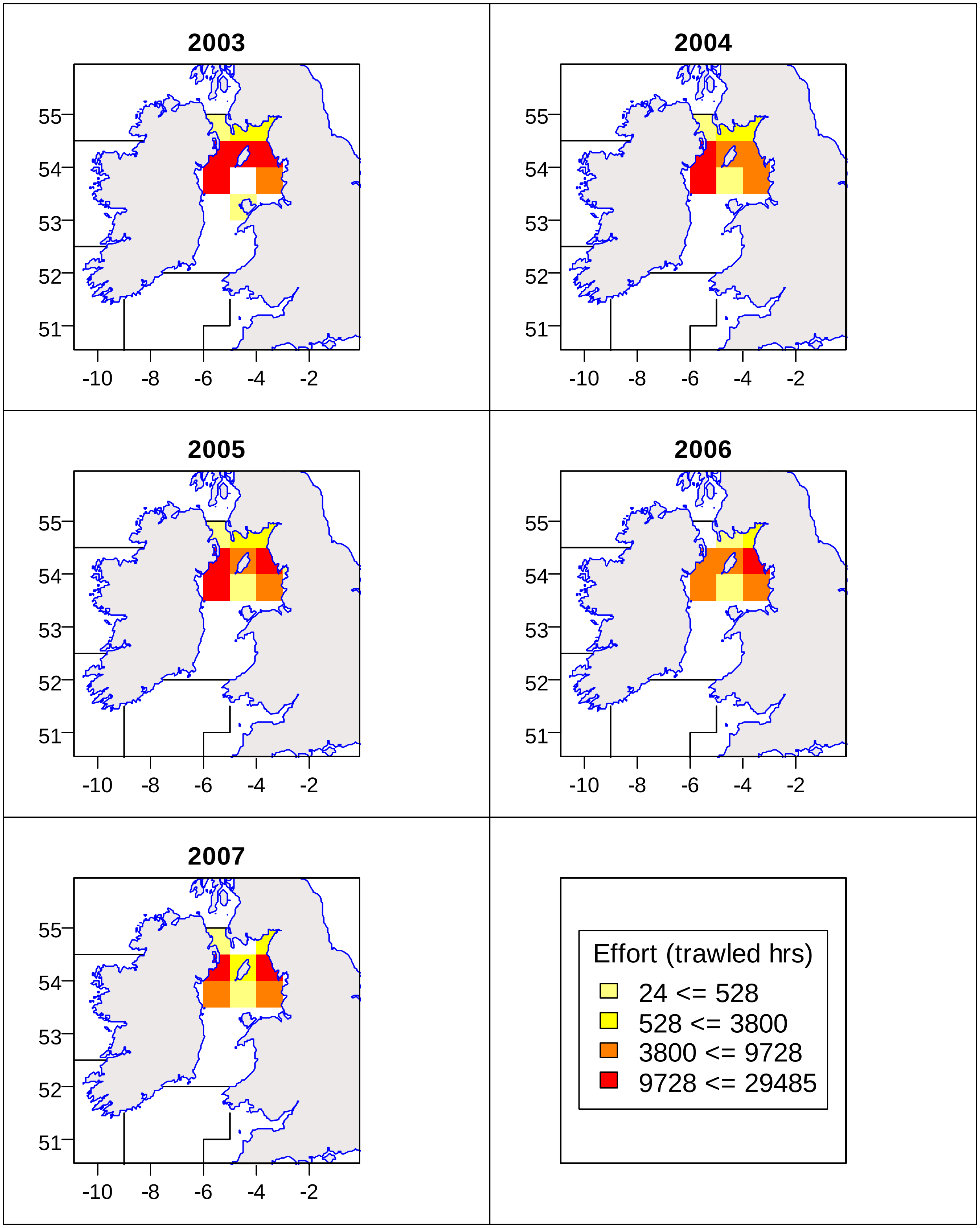


Figure 6.9.4.3. Irish Sea. Spatial distribution of effort (trawled hours) by ICES statistical rectangle for 4a.ii IIA.8.c, 2003-2007.

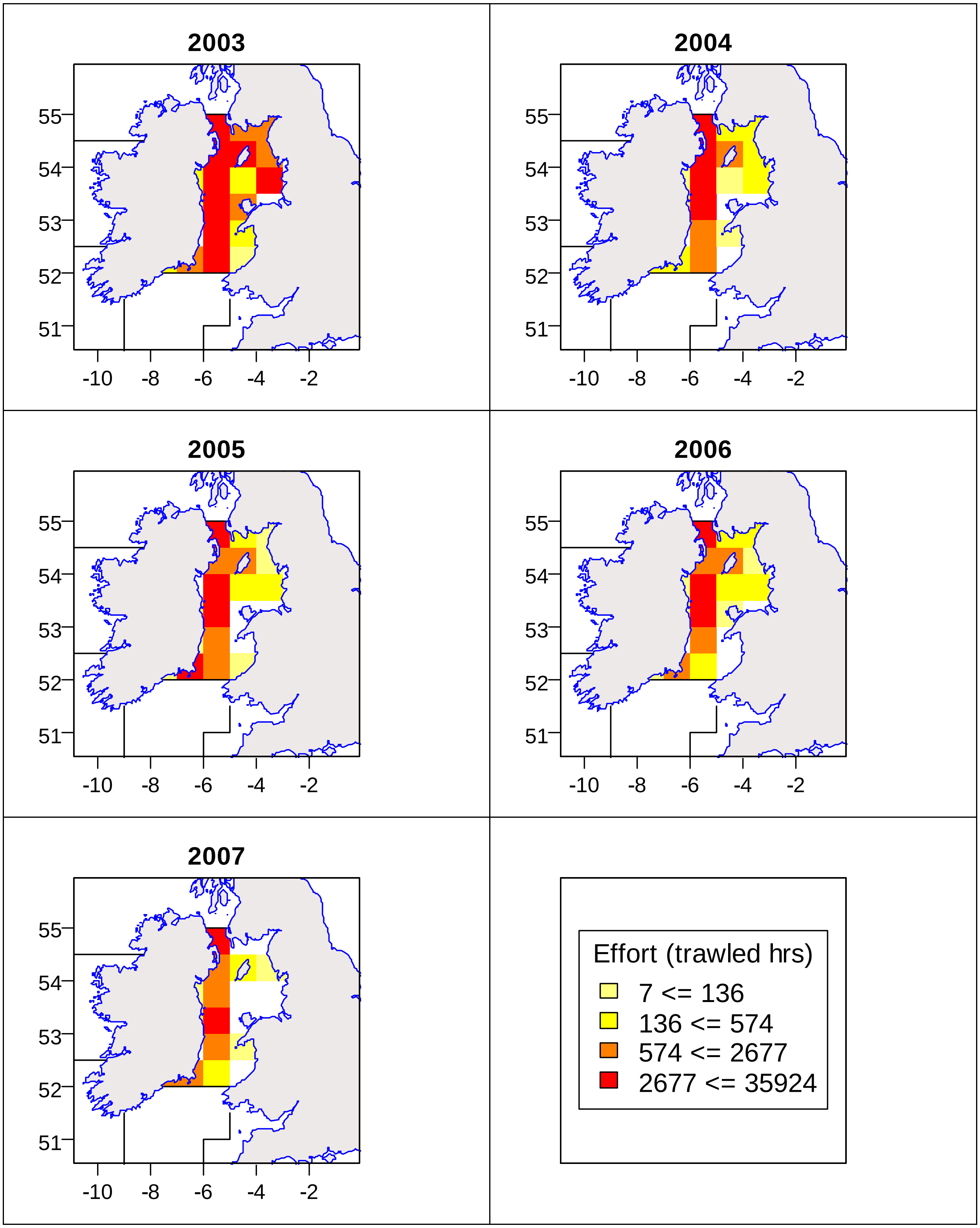


Figure 6.9.4.4. Irish Sea. Spatial distribution of effort (trawled hours) by ICES statistical rectangle for 4a.iv none, 2003-2007.

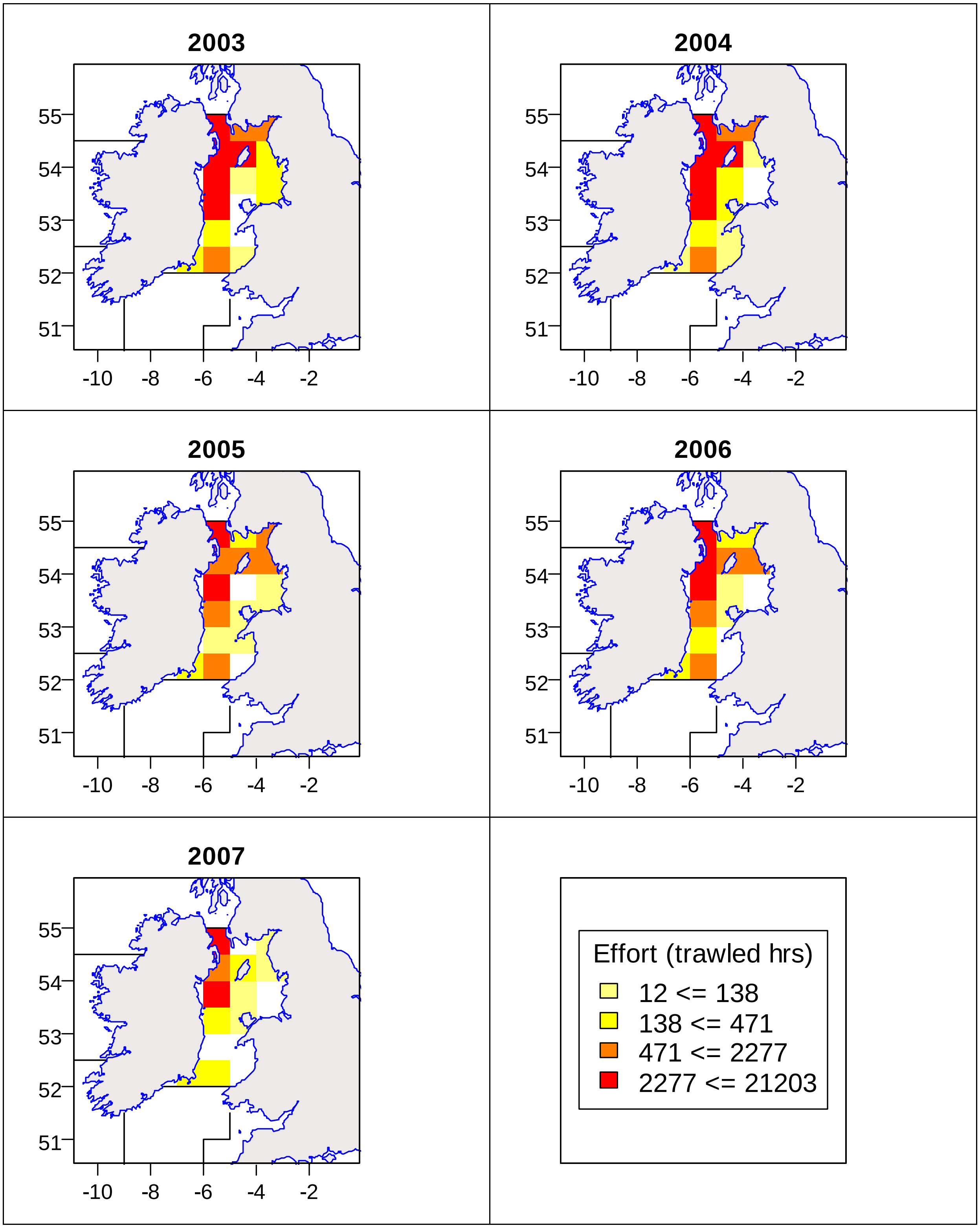


Figure 6.9.4.5. Irish Sea. Spatial distribution of effort (trawled hours) by ICES statistical rectangle for 4a.iv IIA.8.d, 2003-2007.

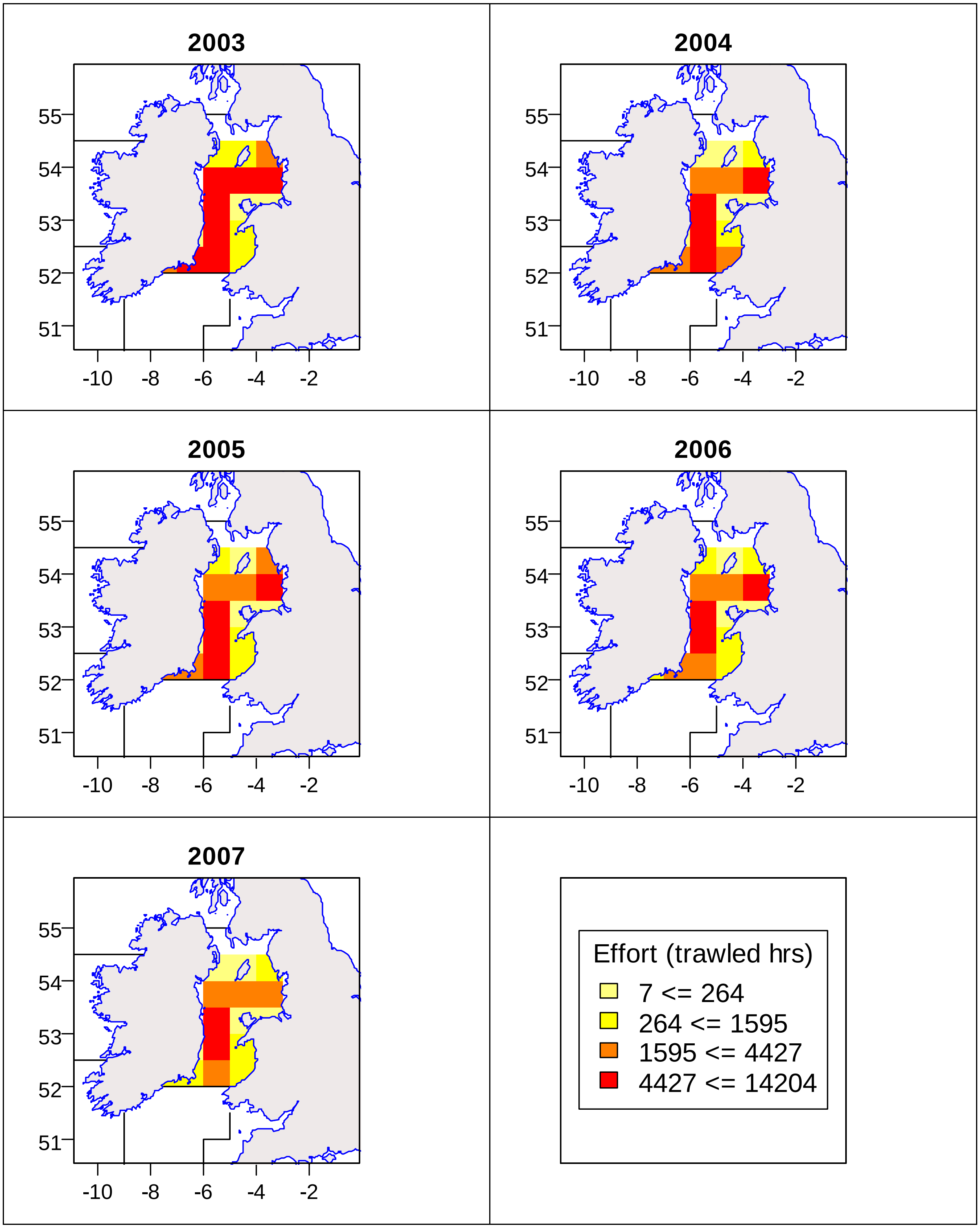


Figure 6.9.4.6. Irish Sea. Spatial distribution of effort (trawled hours) by ICES statistical rectangle for 4b.i none, 2003-2007.

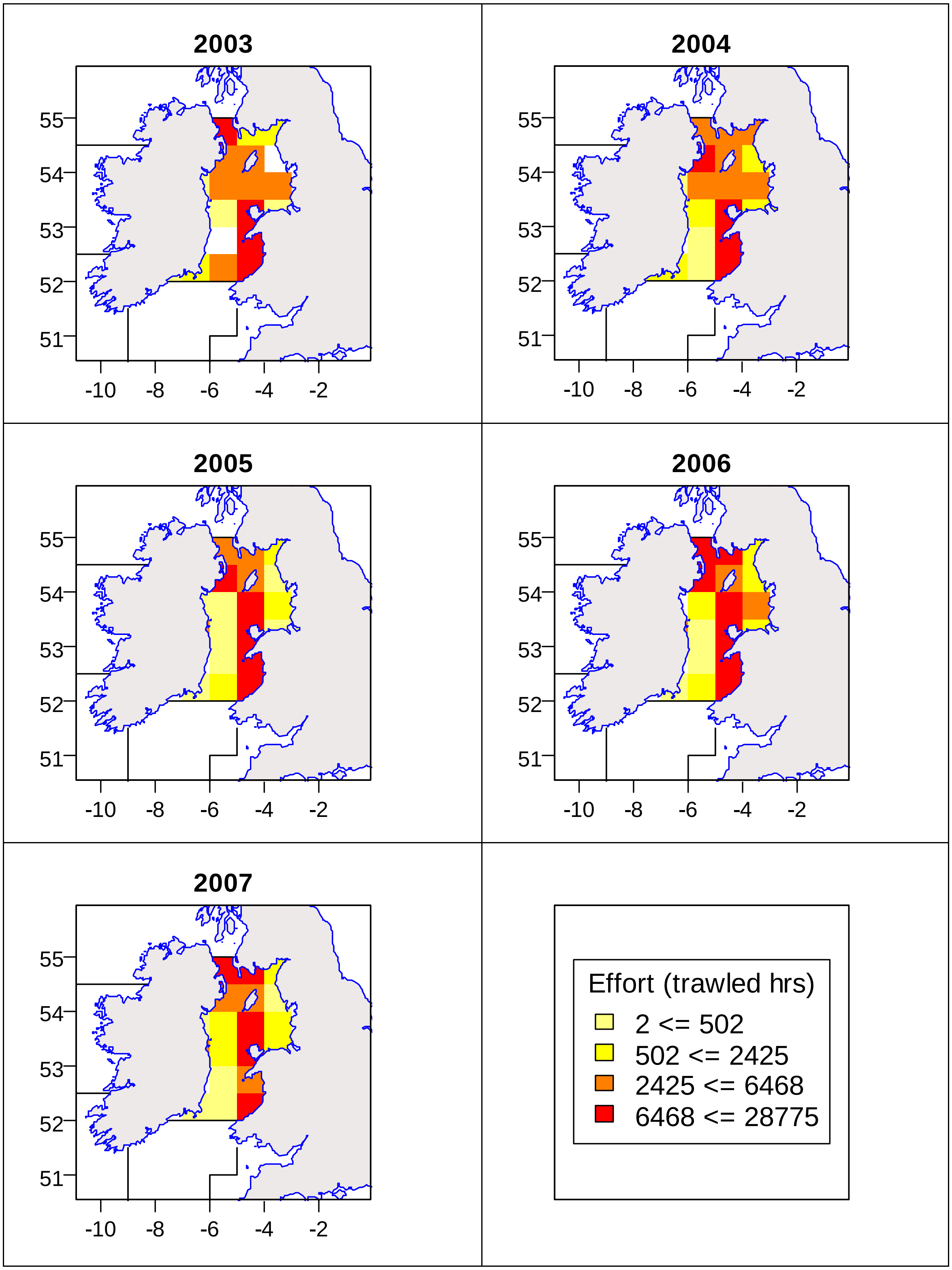


Figure 6.9.4.7. Irish Sea. Spatial distribution of effort (trawled hours) by ICES statistical rectangle for none-none, 2003-2007.

6.9.5. Spatial Distribution of Effective Effort in management area 2d: West of Scotland

Spatial figures of effort for area 2d concentrate on those categories identified as significant in terms of recorded effort (see section 6.2.5) and in terms of catches of cod (see section 6.5.4). From section 6.3.5 catches of plaice and sole are shown to be small for all categories in area 2d and these species were not considered when deciding on categories to present here.

Figures use a common scale across years for a given category (e.g. 4.a.ii. none) but scales are unique to each category such that the colours assigned to statistical rectangles for category 4.a.ii. none can not be compared directly to those assigned for category 4.a.ii.IIA8d say. Figures use a percentiles scale, i.e. the same number of data values found in each colour band is the same. This is after data values across all years have been combined for that category.

4.a.ii.IIA8d – Highest values of effort in the area between the Scottish mainland and the Outer Hebrides (known as the north and south Minches) and also in the area outside the Clyde estuary just to the north of the boundary between areas 2d and 2c. The time series shows a contraction of effort in towards these areas of greatest activity.

4.a.ii none – Shows the same areas of high effort as for category 4.a.ii.IIA8d but also effort on the continental shelf south of 57 degrees north. Activity in this last area has decreased in the period 2003-2007 and effort north of 58.5 degrees north has effectively ceased.

4.a.iv.IIA8d – Effort is concentrated along the West of Scotland management line with some rectangles of higher activity close to the Scottish coast, either in the Minch area and/or just north of the 2d, 2c area border. There is evidence for an overall decrease in effort but the spatial pattern has remained consistent over the period considered.

4.a.iv none – The effort pattern is similar to that for 4.a.iv.IIA8d but with less activity in the Minch area. There is a reduction of effort in the more northern waters (north of 58 degrees north). This trend is not so evident for category 4.a.iv.IIA8d.

4.a.v none – Effort is found in the northern half of management area 2d with little or no effort south of 57 degrees north. North of this line rectangles in the far north east corner of the area are consistently recorded as belonging to the highest effort category and there is evidence of some concentration of effort along the shelf edge/West of Scotland management line. There is little effort, however, in the Minch area or adjacent to the outer Hebrides.

4.e none – There is a concentration of effort along the continental shelf edge consistent with time. There are also rectangles of high effort in the south Minch area and rectangles outside the Clyde estuary to the north of the 2d, 2c area border in some years. Section 6.2.5 showed increased effort recorded in area 2d for this gear category but there is no obvious expansion of areas being fished using long lines.

None.none – Effort unassigned to a regulated gear is mostly contained within two distinct blocks. The first is just to the north of the Scottish mainland and west of the 2d and 2b management area boundaries (4-7 degrees west and 58.5-59.5 degrees north). The second is bounded by the Scottish coastline and 8 degrees west and runs from 55-57 degrees north. Section 6.2.5 shows that the effort assigned to the ‘none none’ category has remained relatively static in the years from 2003. There is also no discernable trend in the distribution of this effort.

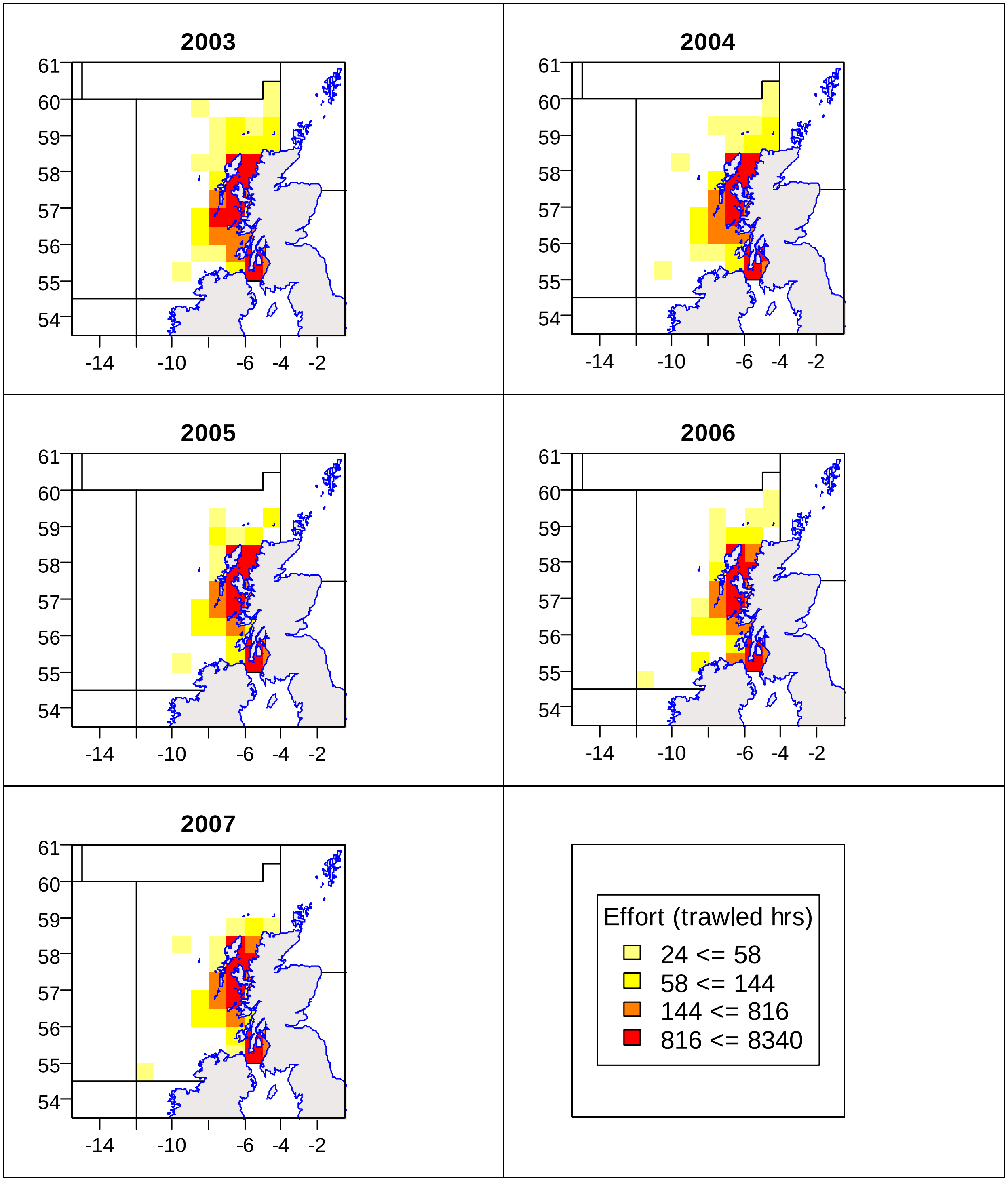


Figure 6.9.5.1 West of Scotland. Effort (trawled hours) by ICES statistical rectangle for 4.a.ii IIA8d, 2003-2007.

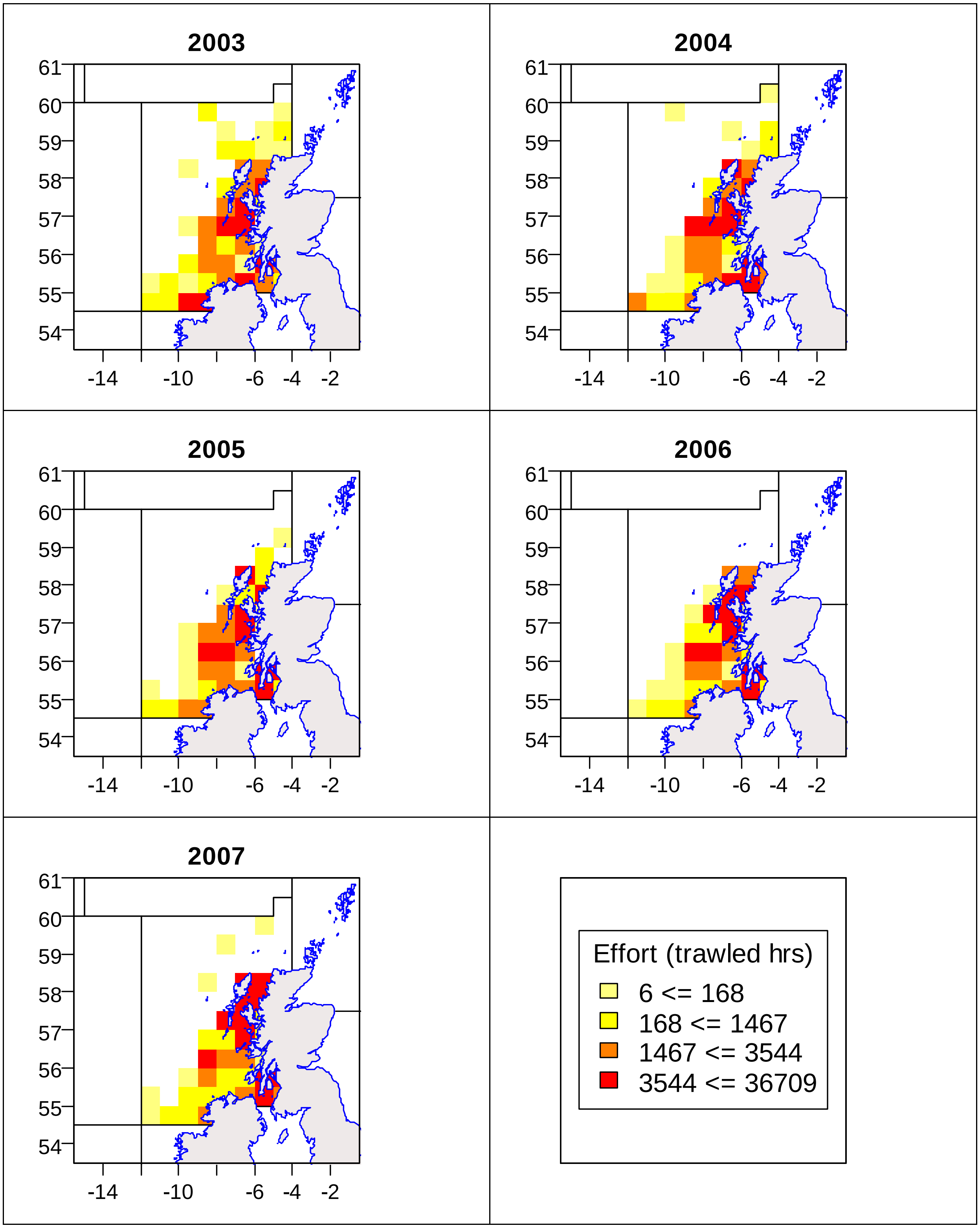


Figure 6.9.5.2 West of Scotland. Effort (trawled hours) by ICES statistical rectangle for 4.a.ii none, 2003-2007.

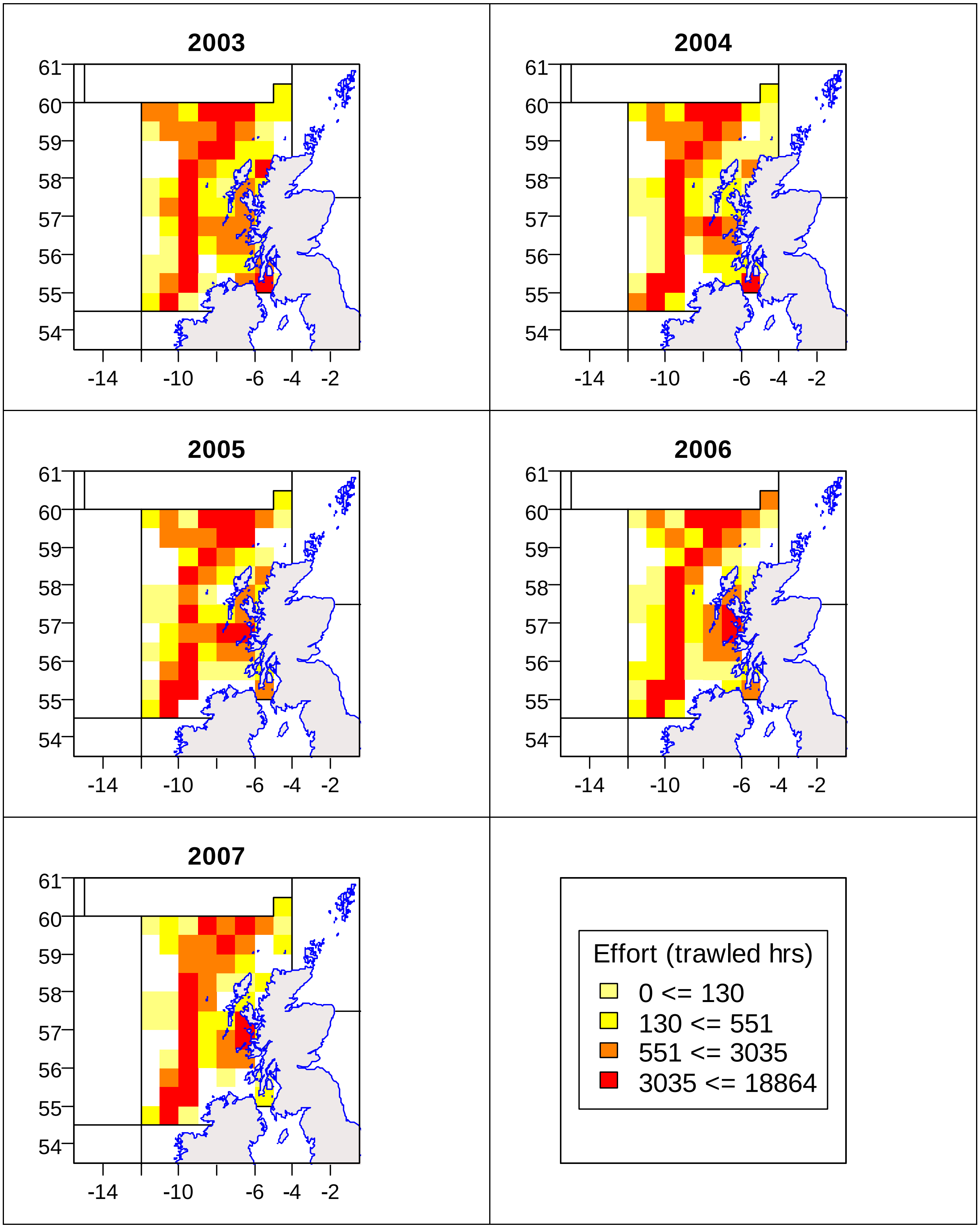


Figure 6.9.5.3 West of Scotland. Effort (trawled hours) by ICES statistical rectangle for 4.a.iv IIA8d, 2003-2007.

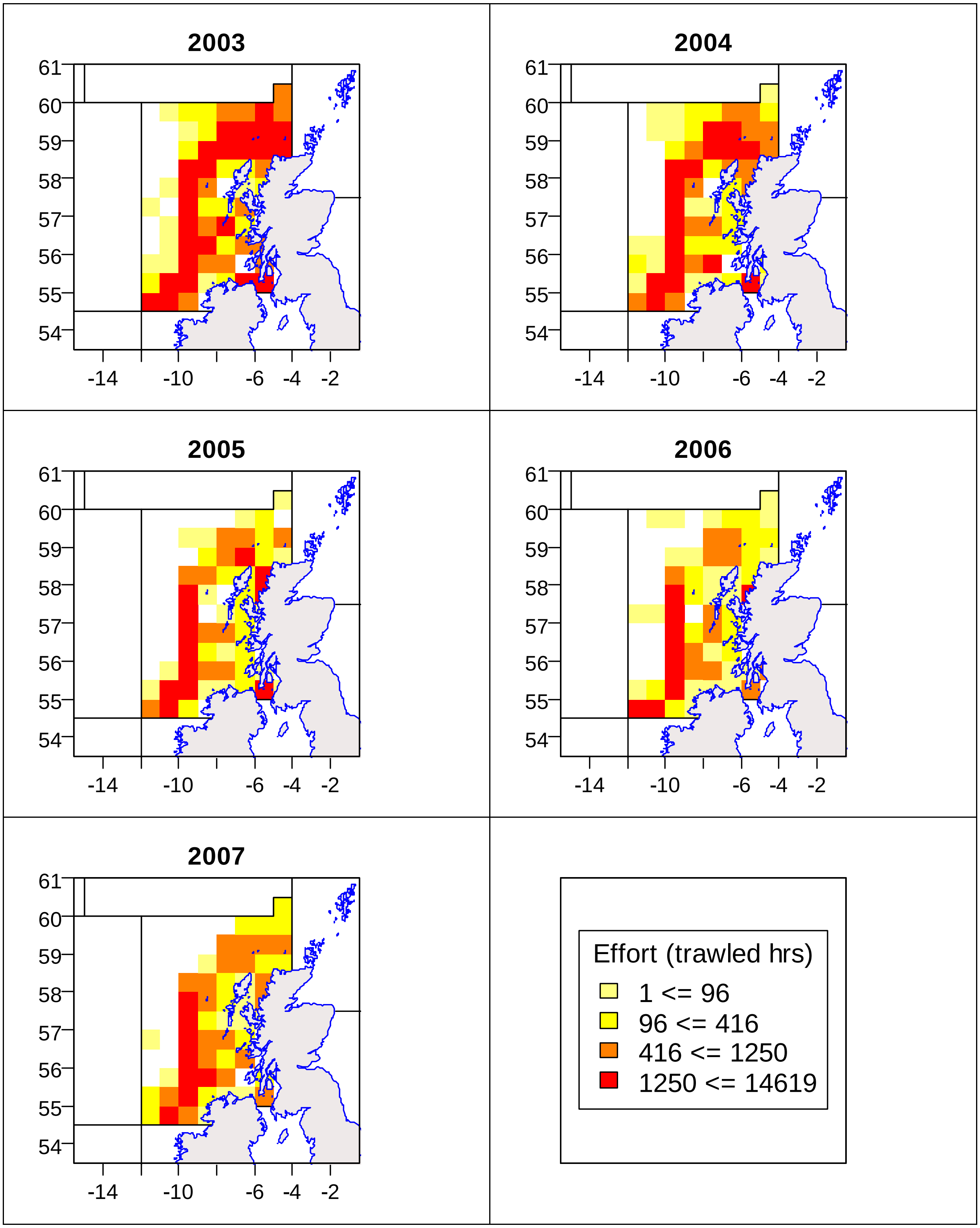


Figure 6.9.5.4 West of Scotland. Effort (trawled hours) by ICES statistical rectangle for 4.a.iv none, 2003-2007.

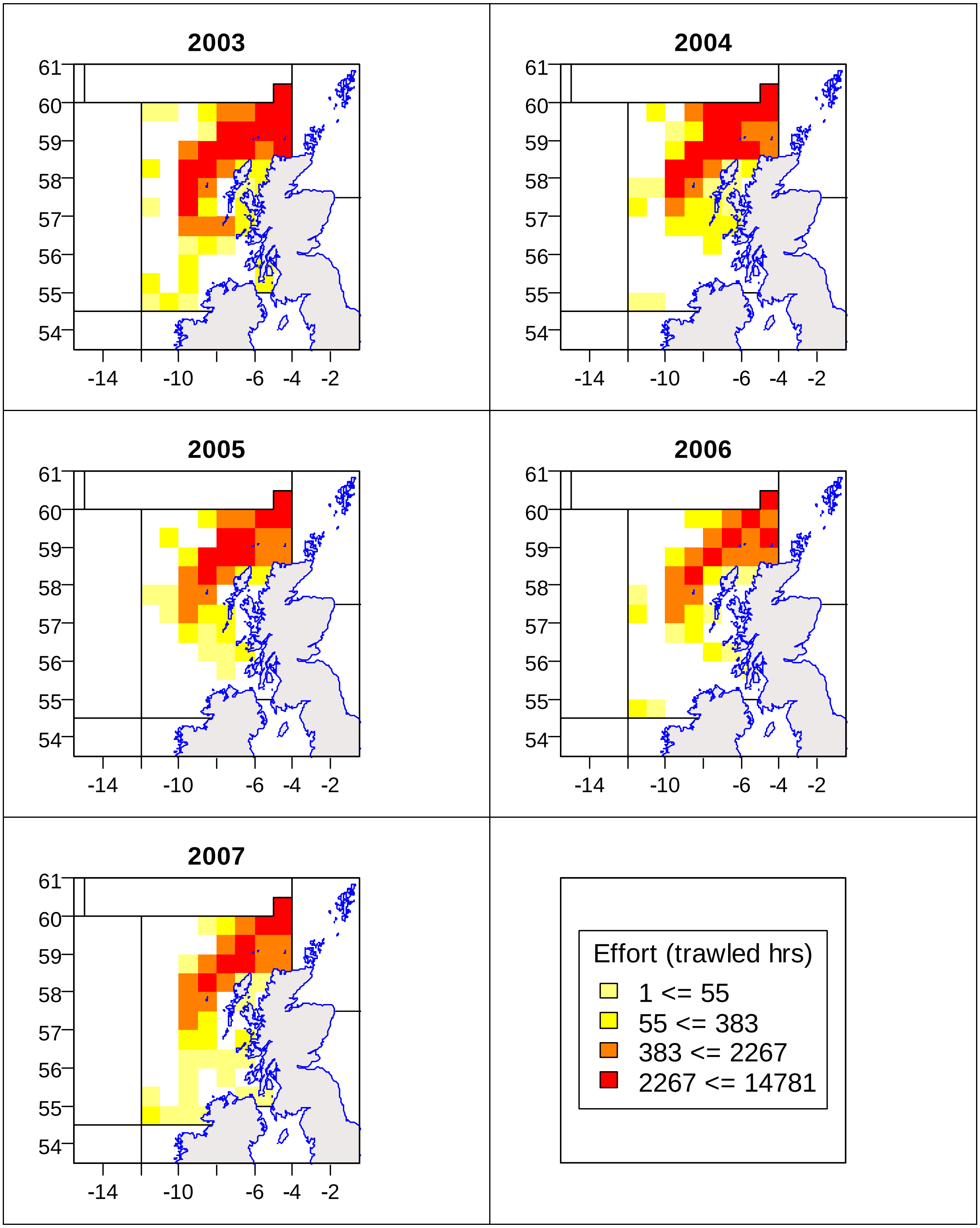


Figure 6.9.5.5 West of Scotland. Effort (trawled hours) by ICES statistical rectangle for 4.a.v none, 2003-2007.

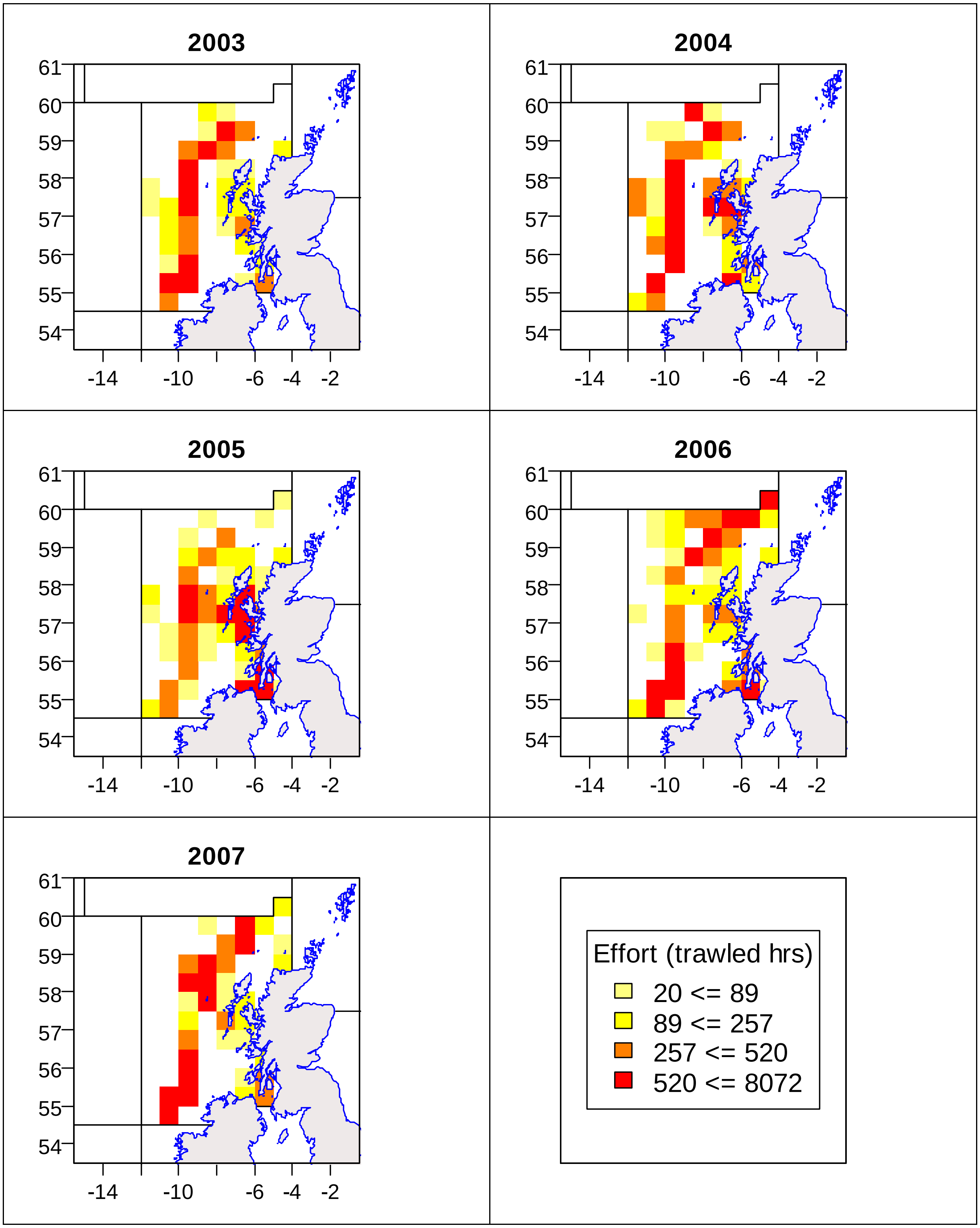


Figure 6.9.5.6 West of Scotland. Effort (trawled hours) by ICES statistical rectangle for 4.e none, 2003-2007.

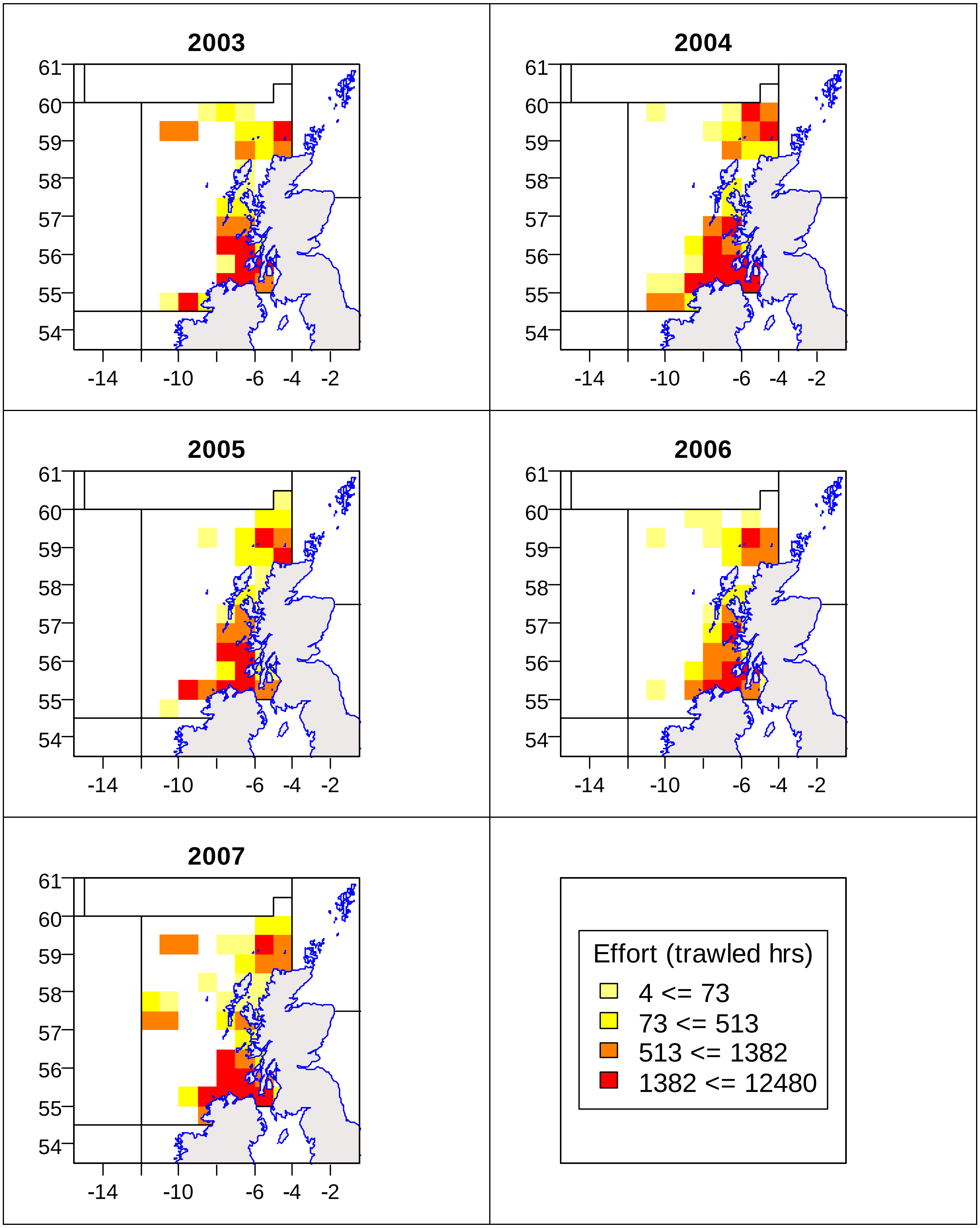


Figure 6.9.5.7 West of Scotland. Effort (trawled hours) by ICES statistical rectangle for 4.e none, 2003-2007.

6.10. Metier versus effort management regime

6.10.1. Introduction

Detailed considerations of the relationships between acknowledged metiers and the categorisations of the effort management regime were performed for two of the areas within the Annex IIa. The Irish Sea, and West of Scotland

6.10.2. Irish Sea Metiers

National species compositions within the Irish Sea have been used as a proxy for metiers. Each gear category has been broken down into its related special conditions and no special condition form used within the Irish Sea. A summary of effort uptake within these forms is given in table 6.10.2.1 below, listing the top three nations contributing to the effort uptake. For the most important gear categories (indicated within the summary table by a tick) further tables and figures have been provided detailing landings compositions as percentages of national landings for the specific combination to allow comparison between nations. These gear categories are discussed below.

4b.i none: Belgium and Ireland are the only two nations to contribute to effort within this gear category. Combined the primary (target) species within this gear category are SRY, sole, plaice, rays, and anglerfish. By nation this is very similar, although Ireland lacks landings of SRY, compensated for by a greater contribution of rays.

4a.ii IIA.8.c: All the effort within this category relates to the UK. Northern Ireland accounts for over 80% of the effort within this gear category, followed by England and minimal contribution from the Isle of Man. Combined, the primary species here is *Nephrops* (75%), followed by plaice, SRX, haddock, and cod. Nationally, this composition is again similar. However, England shows a lower percentage of *Nephrops* with greater percentage landings of plaice than other nations.

4a.ii IIA.8.d: The majority of effort within this category is attributed, again, to Northern Ireland (95%). In addition, a small percentage of effort originates from England, and less than 1% from Scotland. The primary species within this category, overall, is *Nephrops* (90%). This is followed by cod, plaice, haddock and anglerfish. Species compositions between these nations are similar. However, as with 4a.ii IIA.8.c, England shows a lower percentage of *Nephrops* offset with greater percentage landings of plaice.

4a.ii none: Ireland contributes the greatest effort to this category, followed by Northern Ireland and a small (3%) contribution from England. As with the two special conditions for this gear category, the species composition without special condition is dominated by *Nephrops* percentages. This is followed by haddock, cod, ray and plaice. There is little difference between percentage compositions from Ireland and Northern Ireland, England however, has once again lower percentages of *Nephrops* and greater allocation to plaice.

4a.iv IIA.8.c: Effort and landings within this category are low, predominantly Northern Ireland (96%), with some small contribution from England. Overall species composition shows haddock as the primary species. This is followed by plaice, *Nephrops*, cod and hake. The species composition of landings from England is quite different from that of Northern Ireland, showing none of the same top species. The species composition of English landings shows plaice to dominate landings, followed by SRX, dab, BLL, and sole.

4a.iv IIA.8.d: Northern Ireland accounts for the majority of effort within this category, with additional effort from France and England. The overall species composition of this category is similar to that of 4a.iv IIA.8.c, dominated by haddock. This is followed by cod, hake, saithe and dogfish. Each nation shows a different species composition. Northern Ireland landings are dominated by haddock, followed by cod and hake. Whilst France has greatest percentages of SKA, SDV and SCL. England is different again, dominated by plaice.

4a.iv none: Effort within this category is dominated by Ireland, followed by Northern Ireland and France. The top five species within overall landings are cod, haddock, whiting, ray and hake. The main similarity between nations is the presence of cod percentages. However, in the majority of species nations differ, Ireland lands haddock, ray, cod, whiting and plaice. Northern Ireland shows greater similarities to Ireland than France with landings of cod, hake, haddock, *Nephrops*, and saithe. France shows very different landings, RJC, cod, SCL, RJM, and anglerfish.

Table 6.10.2.1. Irish Sea. regulated gear category forms showing percentage effort uptake, and the top three nations involved, 2007.

	Gear									Top 3 nations						
Area	Type	Detailed	Discription	Mesh	Special Condition	Detail	Days allowance	Effort 2007	Uptake (%)	1	% Effort	2	% Effort	3	% Effort	Species detail
2c	4a	4aii	Trawl	70-89mm	IIA81c	track record <5%cod	204	419,718	8.50	NIR	81.23	ENG	18.57	GBI	0.21	✓
2c	4a	4aii	Trawl	70-89mm	IIA81d	track record <5%cod+sol+pla	280	1,715,490	34.75	NIR	95.33	ENG	4.03	SCO	0.64	✓
2c	4a	4aii	Trawl	70-89mm	none		184	2,800,894	56.74	IRL	54.99	NIR	41.65	ENG	3.01	✓
2c	4a	4aiii	Trawl	90-99mm	IIA81d	track record <5%cod+sol+pla	280	2,438	5.47	ENG	68.58	NIR	31.42			
2c	4a	4aiii	Trawl	90-99mm	none		227	42,106	94.53	IRL	32.24	ENG	27.57	NIR	24.03	
2c	4a	4aiv	Trawl	100-119mm	IIA81c	track record <5%cod	148	28,048	4.92	NIR	95.86	ENG	4.14			✓
2c	4a	4aiv	Trawl	100-119mm	IIA81d	track record <5%cod+sol+pla	276	226,132	39.70	NIR	92.53	FRA	7.11	ENG	0.37	✓
2c	4a	4aiv	Trawl	100-119mm	none		86	315,420	55.38	IRL	44.27	NIR	31.88	FRA	19.03	✓
2c	4a	4av	Trawl	>=120mm	IIA81c	track record <5%cod	160	1,712	52.47	NIR	100					
2c	4a	4av	Trawl	>=120mm	IIA81d	track record <5%cod+sol+pla	Unl.	333	10.21	ENG	100					
2c	4a	4av	Trawl	>=120mm	none		114	1,218	37.33	IRL	100					
2c	4b	4bi	Beam Trawl	80-89mm	none		132	1,198,233	100.00							✓
2c	4b	4bii	Beam Trawl	90-99mm	none		143	12,769	100.00	IRL	91.59	SCO	8.41			
2c	4c	4ci	Gillnet	<110mm	none		140	1,387	100.00	ENG	89.11	IRL	10.89			
2c	4c	4cii	Gillnet	110-149mm	none		140	6,314	100.00	IRL	82.96	ENG	17.04			
2c	4c	4ciii	Gillnet	150-219mm	none		115	32,848	100.00	IRL	100					
2c	4e	4e	Longline	NA	none		173	3,852	100.00	ENG	95.2	IRL	4.8			
2c	none	none	No info	No info	none			3,610,926	100.00	SCO	40.21	ENG	27.22	IRL	22.83	

Table 6.10.2.2. Irish Sea. Top five species ranked by percentage landings for the primary nations contributing to effort within gear category 4b.i none (without special condition), 2007.

				Ranked species by landings (ton)				
Category	Nation	% Effort in category	2007 Landings	1	2	3	4	5
4bi none	All Nations		1922.0	SRY (30.5)	SOL (30.5)	RAJ (17.4)	PLE (13.1)	ANF (5.6)
	BEL	56.84	1258.0	SRY (46.6)	SOL (22.3)	PLE (13.6)	ANF (5.2)	COD (4.4)
	IRL	43.16	664.0	RAJ (50.5)	SOL (12.7)	PLE (12)	COD (7.5)	ANF (6.5)

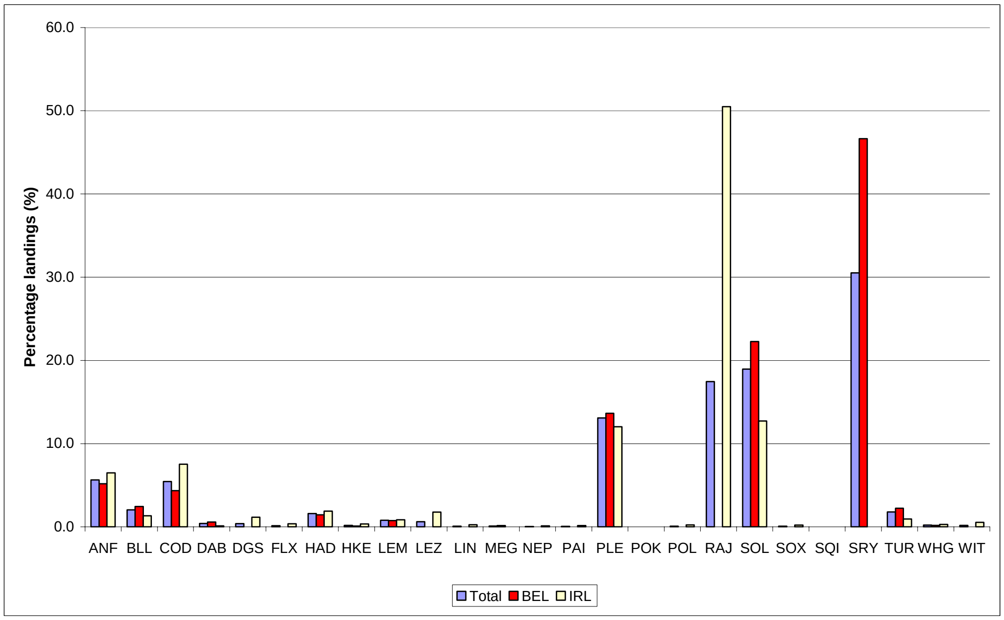


Figure 6.10.2.1. Irish Sea. Percentage species composition of national landings for gear category 4b.i none (without special condition), 2007.

Table 6.10.2.3. Irish Sea. Top five species ranked by percentage landings for the primary nations contributing to effort within gear category 4a.ii IIA.8.c (<5% cod), 2007.

				Ranked species by landings (ton)				
Category	Nation	% Effort in category	2007 Landings	1	2	3	4	5
4a.ii IIA.8.c	All Nations		849.8	NEP (74.8)	PLE (9.1)	SRX (3.6)	HAD (2.5)	COD (2.5)
	NIR	81.23	697.7	NEP (84.5)	HAD (3.1)	COD (2.9)	PLE (2.2)	ANF (2.1)
	ENG	18.57	150.8	PLE (41.3)	NEP (29.3)	SRX (12.8)	FLX (8.8)	DAB (2.7)
	GBI	0.21	1.3	NEP (93.1)	COD (3.8)	HKE (1.9)	ANF (0.6)	TUR (0.5)

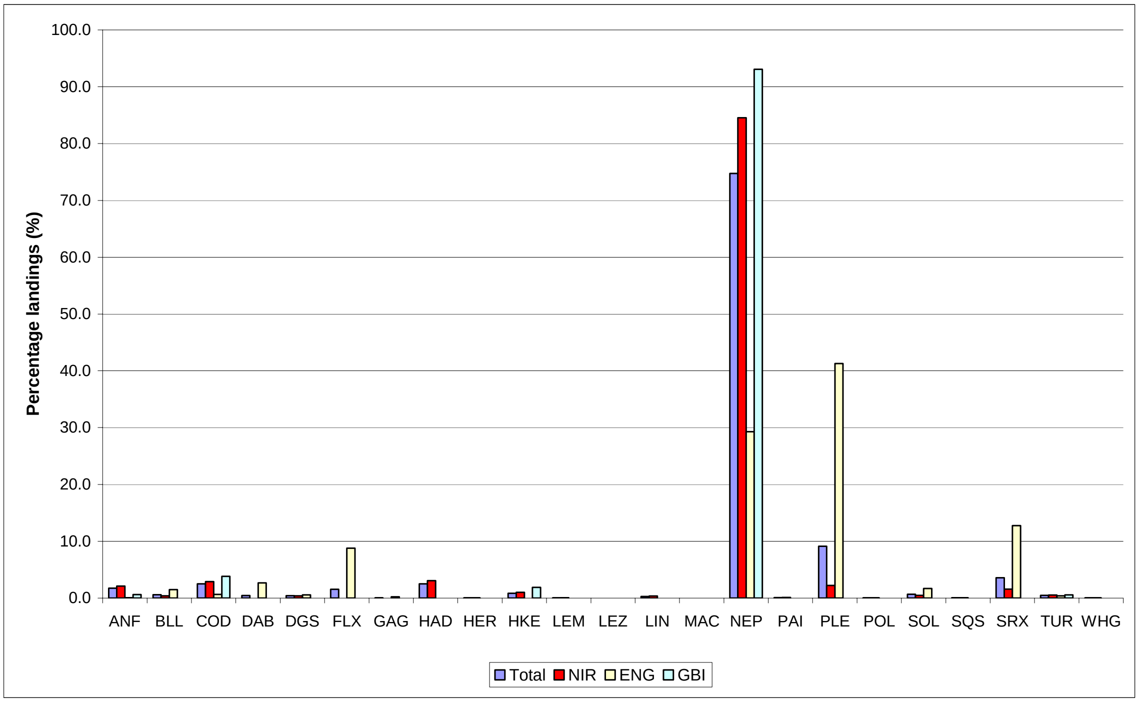


Figure 6.10.2.2. Irish Sea. Percentage species composition of national landings for gear category 4a.ii IIA.8.c (<5% cod), 2007.

Table 6.10.2.4. Irish Sea. Top five species ranked by percentage landings for the primary nations contributing to effort within gear category 4a.ii IIA.8.d (<5% cod, plaice and sole), 2007.

				Ranked species by landings (ton)				
Category	Nation	% Effort in category	2007 Landings	1	2	3	4	5
4a.ii IIA.8.d	All Nations		3908.3	NEP (89.9)	COD (1.8)	PLE (1.6)	HAD (1.5)	ANF (1.5)
	NIR	95.33	3698.9	NEP (91.2)	COD (1.8)	HAD (1.6)	ANF (1.6)	DGS (0.9)
	ENG	4.03	176.0	NEP (64.5)	PLE (20)	SRX (11)	BLL (1.9)	COD (0.9)
	SCO	0.64	33.4	NEP (87.8)	COD (4.3)	SRX (3.1)	ANF (1.6)	OTH (1.1)

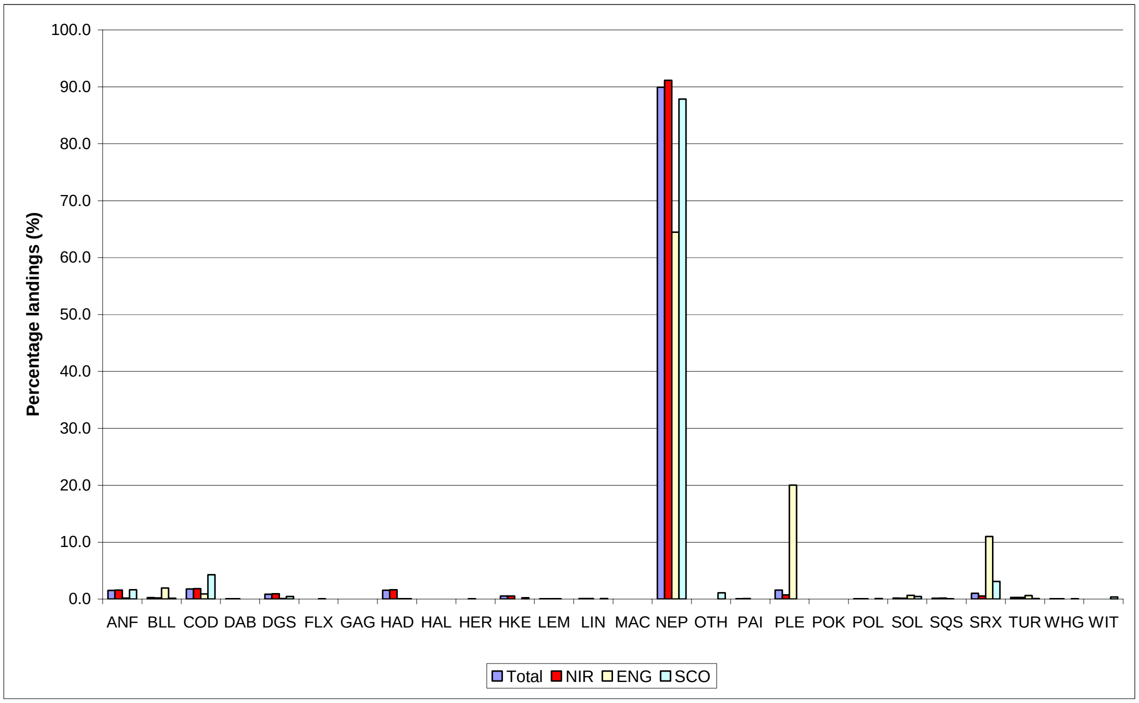


Figure 6.10.2.3. Irish Sea. Percentage species composition of national landings for gear category 4a.ii IIA.8.d (<5% cod, plaice and sole), 2007.

Table 6.10.2.5. Irish Sea. Top five species ranked by percentage landings for the primary nations contributing to effort within gear category 4a.ii none (without special condition), 2007.

				Ranked species by landings (ton)				
Category	Nation	% Effort in category	2007 Landings	1	2	3	4	5
4a.ii none	All Nations		6949.7	NEP (74.9)	HAD (4.8)	COD (4.5)	RAJ (4.3)	PLE (2.9)
	IRL	54.99	4279.2	NEP (70.7)	RAJ (7)	HAD (6.1)	COD (5.2)	ANF (2.9)
	NIR	41.65	2521.3	NEP (85.3)	COD (3.4)	HAD (3)	ANF (2.2)	PLE (1.5)
	ENG	3.01	147.0	PLE (59.3)	NEP (16.4)	SRX (13.8)	DGS (2.2)	DAB (2.1)

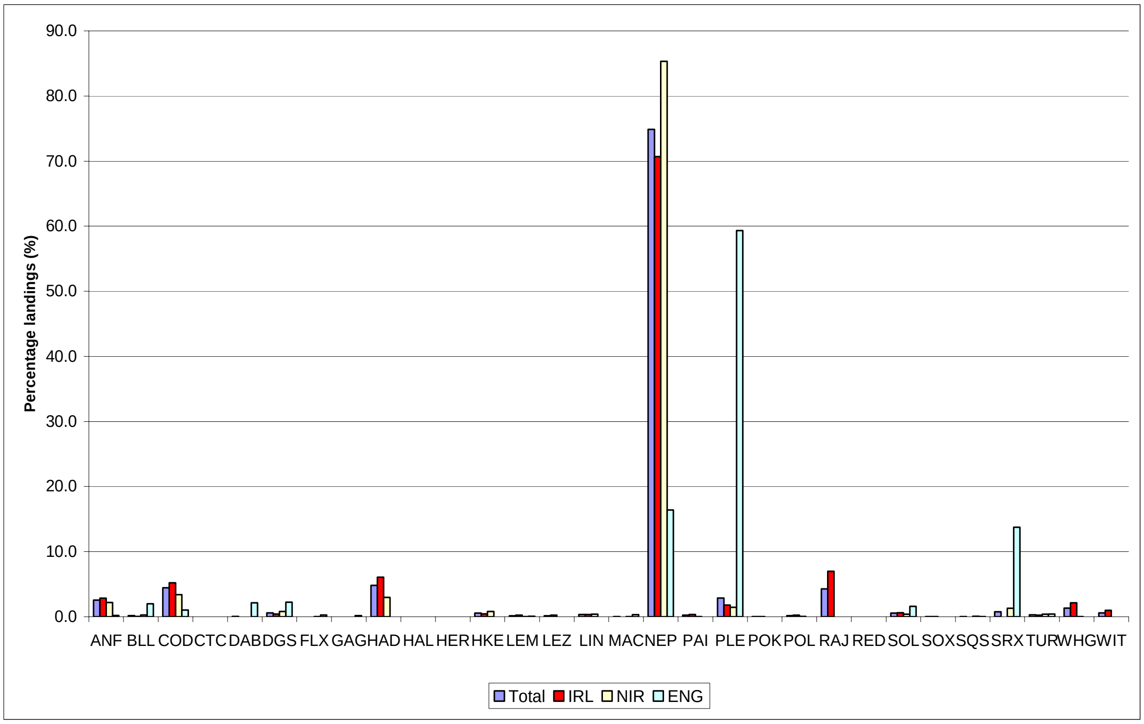


Figure 6.10.2.4. Irish Sea. Percentage species composition of national landings for gear category 4a.ii none (without special condition), 2007.

Table 6.10.2.6. Irish Sea. Top five species ranked by percentage landings for the primary nations contributing to effort within gear category 4a.iv IIA.8.c (<5% cod), 2007.

				Ranked species by landings (ton)				
Category	Nation	% Effort in category	2007 Landings	1	2	3	4	5
4a.iv IIA.8.c	All Nations		69.1	HAD (87)	PLE (7.1)	NEP (3.4)	COD (0.7)	HKE (0.6)
	NIR	95.86	65.4	HAD (92)	NEP (3.6)	PLE (2.1)	COD (0.7)	HKE (0.7)
	ENG	4.14	3.8	PLE (94.2)	SRX (2.6)	DAB (1.4)	BLL (1.1)	SOL (0.5)

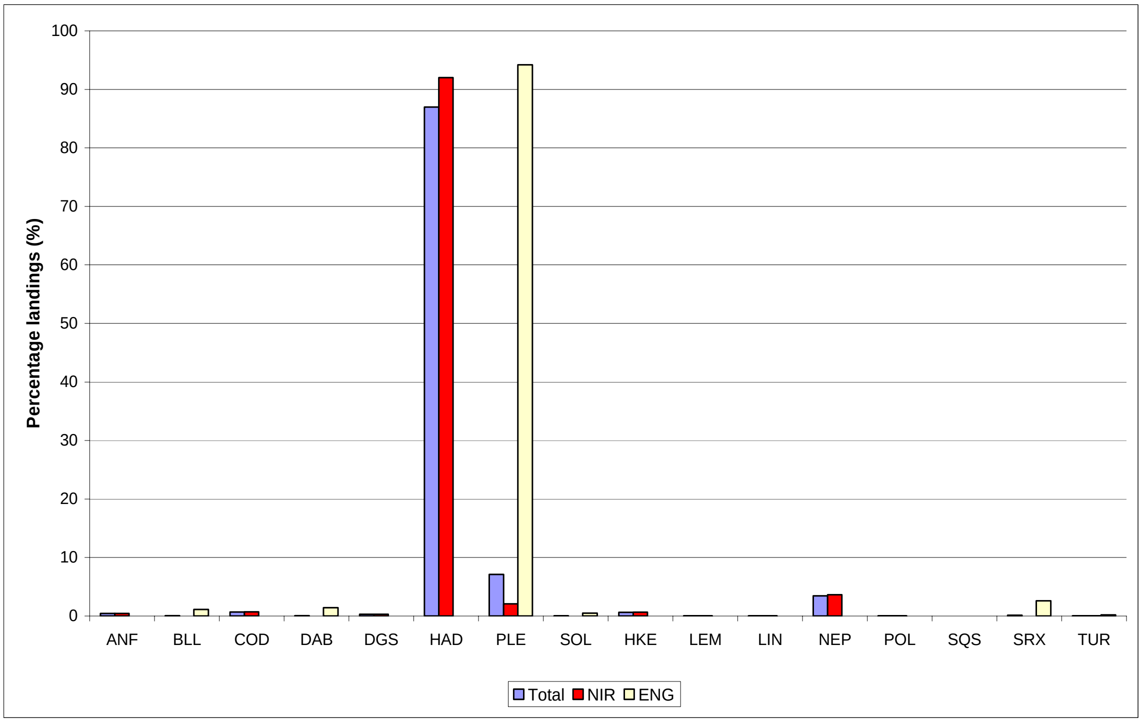


Figure 6.10.2.5. Irish Sea. Percentage species composition of national landings for gear category 4a.iv IIA.8.c (<5% cod), 2007.

Table 6.10.2.7. Irish Sea. Top five species ranked by percentage landings for the primary nations contributing to effort within gear category 4a.iv IIA.8.d (<5% cod, plaice and sole), 2007.

				Ranked species by landings (ton)				
Category	Nation	% Effort in category	2007 Landings	1	2	3	4	5
4a.iv IIA.8.d	All Nations		520.0	HAD (47.8)	COD (30.9)	HKE (9.6)	POL (2.8)	DGS (2)
	NIR	92.53	496.2	HAD (49.7)	COD (32.3)	HKE (10.1)	POL (2.8)	DGS (1.8)
	FRA	7.11	22.1	SKA (19)	SDV (11.9)	SCL (11.5)	HAD (9.9)	ANF (8.5)
	ENG	0.37	1.7	PLE (90.3)	SRX (7.1)	SQS (1.3)	COD (0.6)	BLL (0.3)

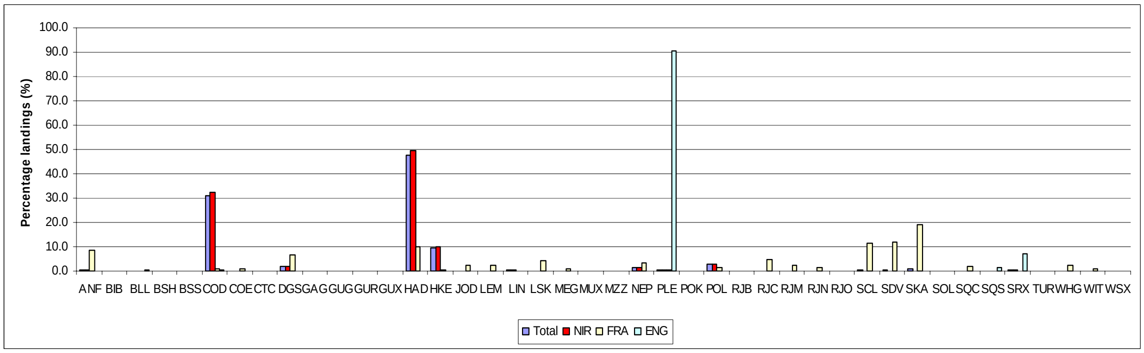


Figure 6.10.2.6. Irish Sea. Percentage species composition of national landings for gear category 4a.iv IIA.8.d (<5% cod, plaice and sole), 2007.

Table 6.10.2.8. Irish Sea. Top five species ranked by percentage landings for the primary nations contributing to effort within gear category 4a.iv none (without special condition), 2007.

				Ranked species by landings (ton)				
Category	Nation	% Effort in category	2007 Landings	1	2	3	4	5
4a.iv none	All Nations		600.6	COD (26.3)	HAD (17.7)	RAJ (11)	WHG (10.7)	HKE (4.5)
	IRL	44.27	320.7	HAD (25.3)	RAJ (20.6)	COD (20.6)	WHG (19.4)	PLE (4)
	NIR	31.88	134.8	COD (53)	HKE (17.6)	HAD (14.9)	NEP (3.7)	POL (3.1)
	FRA	19.03	121.7	RJC (21.2)	COD (14.3)	SCL (11.7)	RJM (9.5)	ANF (8.1)

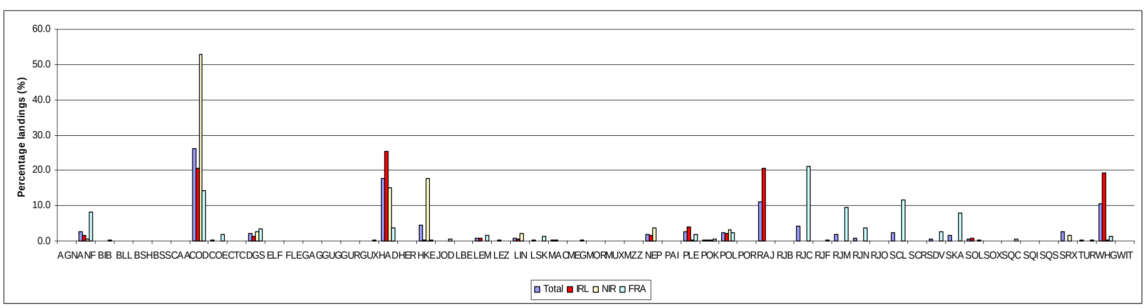


Figure 6.10.2.7. Irish Sea. Percentage species composition of national landings for gear category 4a.iv none without special condition), 2007.

6.10.3. Comparison of Regulated Gears in Annex IIA and Metiers under the Revised DCR in management area 2d: West of Scotland

The gear categories controlled under Annex IIA are shown in Table 6.10.3.1 with the effort (kW*days) recorded against these categories in 2007 in area 2d, West of Scotland. Categories with recorded effort have the top three nations contributing to that effort listed. For those categories with a substantial amount of effort recorded against them and/or a high ranking in terms of cod catch (tonnes) in 2007 (see also section 6.5.4) the catch composition of the top three national fleets within the category are presented, on the assumption different metiers are most likely to reside within a gear category because of differences in fishing practices between nations. Catch compositions can also be compared across current gear categories to determine if any categories appear redundant.

Tables 6.10.3.2 to 6.10.3.4 and Figures 6.10.3.1 to 6.10.3.3 indicate 2 metiers. Scottish, Northern Irish and English vessels operate a targeted *Nephrops* fishery. Southern Irish vessels take a mixed demersal catch with anglerfish as the primary species. There is very little difference in the overall catch composition of the 4.a.ii.none and 4.a.ii.IIA8d categories or between the 4.a.ii and 4.a.iii mesh size categories (with the exception some anglerfish are landed using the bigger mesh gear).

Tables 6.10.3.5 and 6.10.3.6 suggest French fleet effort in categories 4.a.iv.none and 4.a.iv.IIA8d belong to a single metier. This targets demersal species that prefer deeper water, most probably along the continental slope. Within the 4.a.iv.IIA8d category the German fishery appears a unique metier as (if landings reflect catch) it alone takes a very clean catch of saithe. The Scottish landings suggest two metiers. One targets *Nephrops* and with the exception of mesh size resembles Scottish vessel landings under category 4.a.iii.none. The second catches demersal species associated with the continental shelf.

It can be seen from Tables 6.10.3.7 and 6.10.3.8 that virtually all effort recorded for the categories 4.a.v.none and 4.a.v.IIA8d is by Scottish vessels. These tables together with Figures 6.10.3.6 and 6.10.3.7 also indicate there is little difference in catch composition between Scottish vessels in these categories. This suggests the IIA8d special condition is again of little relevance.

Table 6.10.3.9 and Figure 6.10.3.8 show the long line category to represent a single metier consistent across nations. The none.none category is the single biggest category in terms of effort. Table 6.10.3.10 indicates at least two distinct metiers within the Republic of Ireland and Northern Ireland. The main species landed include three pelagic species and crabs (PAI). The pelagic species indicate effort using trawl gears and mesh sizes between 33mm and 69mm. Crab landings indicate effort by pots. Effort in these two metiers is confirmed by Table 6.6.5.1 in section 6.6.5.

Table 6.10.3.1 West of Scotland: Effort recorded against gear categories contained in Annex IIA and percentage share of effort within gear category by top three participating nations. ‘Uptake’ column shows percentage share of gear category within gear-mesh size grouping. Right hand column indicates categories where species composition of national fleets was investigated.

Area	Type	Gear Detailed	Description	Mesh	Specon	Description of Specon	Days 2007 2d	Effort 2007	Uptake	Top three nations			Ranking effort	Ranking cod (t)	Species breakdown
2d	4a	4ai	Trawls	16-32mm	none		228	21264		IRL 98.80%	SCO 1.20%		15	-	
2d	4a	4aii	Trawls	70-89mm	none		204	1508092	31.4%	SCO 51.77%	IRL 26.86%	NIR 19.99%	4	3	✓
2d	4a	4aii	Trawls	70-89mm	IIA81b	Use of sorting grid	unlimited	0	0.0%				-	-	
2d	4a	4aii	Trawls	70-89mm	IIA81c	track record <5%cod	227	46075	1.0%	NIR 100.00%			12	-	
2d	4a	4aii	Trawls	70-89mm	IIA81d	track record <5%cod+sol+pla	252	3248673	67.6%	SCO 89.53%	NIR 9.68%	ENG 0.76%	3	5	✓
2d	4a	4aiii	Trawls	90-99mm	none		227	1095534	97.4%	SCO 92.28%	NIR 5.40%	IRL 2.22%	8	7	✓
2d	4a	4aiii	Trawls	90-99mm	IIA81a	120mm sq mesh window	227	0	0.0%				-	-	
2d	4a	4aiii	Trawls	90-99mm	IIA81d	track record <5%cod+sol+pla	280	29802	2.6%	NIR 54.54%	ENG 40.37%	SCO 5.09%	13	6	
2d	4a	4aiii	Trawls	90-99mm	IIA81l	Use of escape window	238	0	0.0%				-	-	
2d	4a	4aiv	Trawls	100-119mm	none		69	1162017	24.6%	IRL 47.09%	FRA 33.26%	SCO 17.71%	7	2	✓
2d	4a	4aiv	Trawls	100-119mm	IIA81a	120mm sq mesh window	91	0	0.0%				-	-	
2d	4a	4aiv	Trawls	100-119mm	IIA81c	track record <5%cod	148	25675	0.5%	SCO 92.50%	NIR 7.50%		14		
2d	4a	4aiv	Trawls	100-119mm	IIA81d	track record <5%cod+sol+pla	276	3537323	74.9%	FRA 91.96%	SCO 7.84%	GER 0.08%	2	4	✓
2d	4a	4aiv	Trawls	100-119mm	IIA81k	<5%cod and >60% plaice	-	0	0.0%				-	-	
2d	4a	4av	Trawls	>=120mm	none		70	1331246	87.1%	SCO 97.87%	IRL 1.59%	ENG 0.43%	5	1	✓
2d	4a	4av	Trawls	>=120mm	IIA81a	120mm sq mesh window	91	0	0.0%				-	-	
2d	4a	4av	Trawls	>=120mm	IIA81c	track record <5%cod	160	20143	1.3%	NIR 100.00%			16		
2d	4a	4av	Trawls	>=120mm	IIA81d	track record <5%cod+sol+pla	279	176904	11.6%	SCO 99.18%	FRA 0.82%		9	9	✓
2d	4a	4av	Trawls	>=120mm	IIA81h	automatic licence suspension	103	0	0.0%				-	-	
2d	4a	4av	Trawls	>=120mm	IIA81j	140mm sq window + h	115	0	0.0%				-	-	
2d	4a	4av	Trawls	>=120mm	IIA8k	<5%cod and >60% plaice	-	-							
2d	4b	4bi	Beam trawl	80-89mm	none		143	1252		BEL 100.00%			18	-	
2d	4b	4bii	Beam trawl	90-99mm	none		143	0					-	-	
2d	4b	4biii	Beam trawl	100-119mm	none		143	0					-	-	
2d	4b	4biii	Beam trawl	100-119mm	IIA81c	track record <5%cod	155	0					-	-	
2d	4b	4biii	Beam trawl	100-119mm	IIA81i	Use of beams in 2003-2006	155	0					-	-	
2d	4b	4biv	Beam trawl	>=120mm	none		143	0					-	-	
2d	4b	4biv	Beam trawl	>=120mm	IIA81c	track record <5%cod	155	0					-	-	
2d	4b	4biv	Beam trawl	>=120mm	IIA81e	track record <5%cod & >60% p	155	0					-	-	
2d	4b	4biv	Beam trawl	>=120mm	IIA81i	Use of beams in 2003-2006	155	0					-	-	
2d	4c	4ci	Gillnets	<110mm	none		140	1703		IRL 100.00%			17	-	
2d	4c	4cii	Gillnets	110-149mm	none		140	173548		FRA 93.59%	IRL 6.35%	SCO 0.06%	10	8	✓
2d	4c	4ciii	Gillnets	150-219mm	none		140	512		IRL 100.00%			19	-	
2d	4c	4civ	Gillnets	>=220mm	none		140	81591	100.0%	FRA 54.12%	ENG 44.34%	IRL 1.05%	11	-	
2d	4c	4civ	Gillnets	>=220mm	IIA81f	track record <5%cod & >5% tur	140	0	0.0%				-	-	
2d	4d	4d	Trammel nets		none		140	0					-	-	
2d	4d	4d	Trammel nets		IIA81g	Day vessels, mesh <110	140	0					-	-	
2d	4e	4e	Longlines		none		173	1281919		SCO 40.48%	FRA 37.01%	ENG 22.52%	6	-	✓
2d	none	none	No info		none			3553811	100.0%	SCO 64.15%	IRL 19.16%	NIR 9.18%	1	-	✓
2d	none	none	No info		IIA81c	track record <5%cod		0	0.0%				-	-	
2d	none	none	No info		IIA81d	track record <5%cod+sol+pla		0	0.0%				-	-	

Table 6.10.3.2 West of Scotland: 4.a.ii.none; Top five species in catch composition within gear category when data aggregated across nations and for top three nations using gear category.

				Ranked species by landings (ton)				
Category	Nation	% Effort in Ca	2007 Landings	1	2	3	4	5
4.a.ii.none	All Nations		3513.3	NEP (2746.4)	ANF (169.1)	HAD (153.3)	LEZ (103.3)	RAJ (58.0)
	SCO	51.77	1792.8	NEP (1765.3)	OTH (6.5)	SRX (5.1)	DGS (4.3)	HAD (4.2)
	IRL	26.86	847.3	ANF (165.0)	HAD (142.5)	NEP (129.5)	LEZ (102.7)	RAJ (58.0)
	NIR	19.99	812.0	NEP (790.3)	HAD (6.6)	DGS (4.9)	HKE (3.1)	COD (2.3)

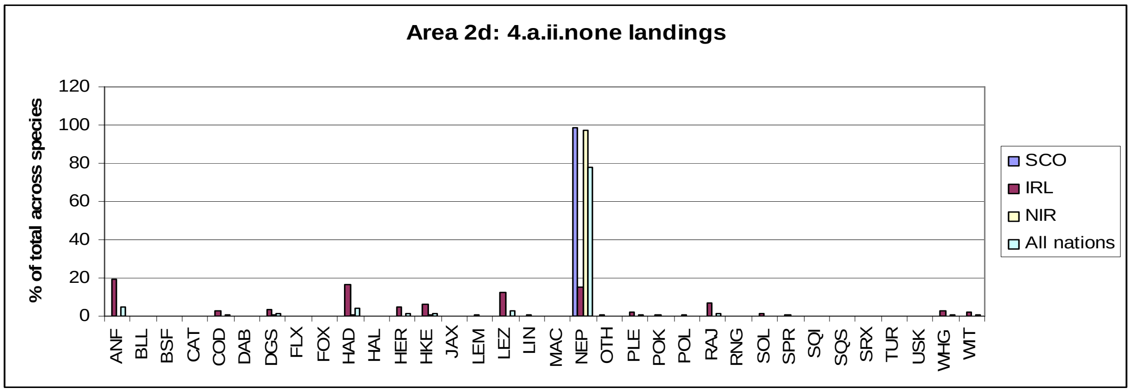


Figure 6.10.3.1 West of Scotland: 4.a.ii.none; Catch composition within gear category when data aggregated across nations and for top three nations using gear category. Scale represents % of overall catch within that category by the nation concerned.

Table 6.10.3.3 West of Scotland: 4.a.ii.IIA8d; Top five species in catch composition within gear category when data aggregated across nations and for top three nations using gear category.

				Ranked species by landings (ton)				
Category	Nation	% Effort in Category	2007 Landings	1	2	3	4	5
4.a.ii.IIA8d	All Nations		7805.8	NEP (7421.7)	ANF (57.9)	HAD (49.6)	OTH (44.5)	SRX (44.2)
	SCO	89.53	6921.2	NEP (6553.9)	ANF (56.6)	OTH (44.5)	SRX (43.5)	HAD (43.3)
	NIR	9.68	809.6	NEP (795.5)	HAD (6.15)	HKE (2.5)	COD (2.1)	SQS (0.6)
	ENG	0.76	73.8	NEP (72.3)	WHG (0.4)	ANF (0.3)	COD (0.3)	SRX (0.2)

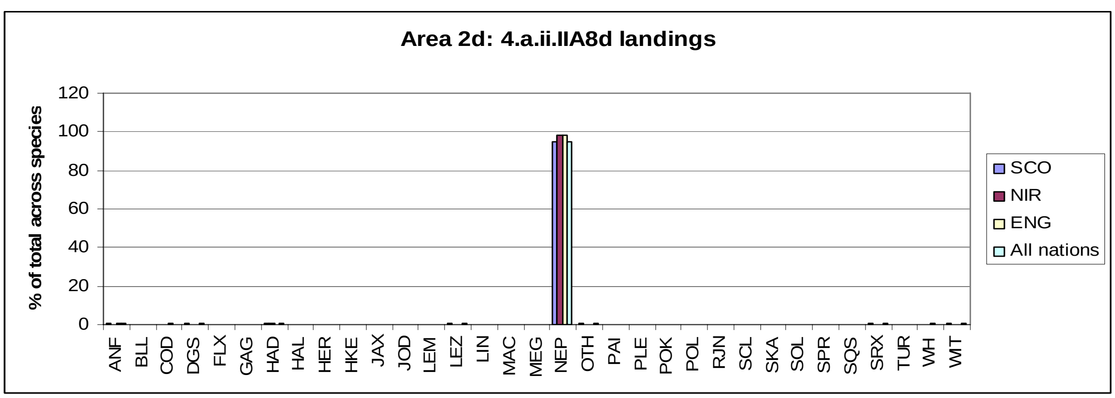


Figure 6.10.3.2 West of Scotland: 4.a.ii.IIA8d; Catch composition within gear category when data aggregated across nations and for top three nations using gear category. Scale represents % of overall catch within that category by the nation concerned.

Table 6.10.3.4 West of Scotland: 4.a.iii.none; Top five species in catch composition within gear category when data aggregated across nations and for top three nations using gear category.

				Ranked species by landings (ton)				
Category	Nation	% Effort in Category	2007 Landings	1	2	3	4	5
4.a.iii.none	All Nations		884.6	NEP (623.5)	ANF (124.8)	LEZ (26.3)	HAD (20.8)	HKE (16.9)
	SCO	92.28	674.9	NEP (518.4)	ANF (53.2)	LEZ (19.6)	HAD (17.2)	WIT (14.2)
	NIR	5.4	130.8	NEP (103.7)	ANF (10.0)	HKE (3.6)	LEZ (3.5)	SRX (2.5)
	IRL	2.22	77.3	ANF (61.5)	RAJ (3.2)	LEZ (3.1)	PLE (2.3)	SOL (1.5)

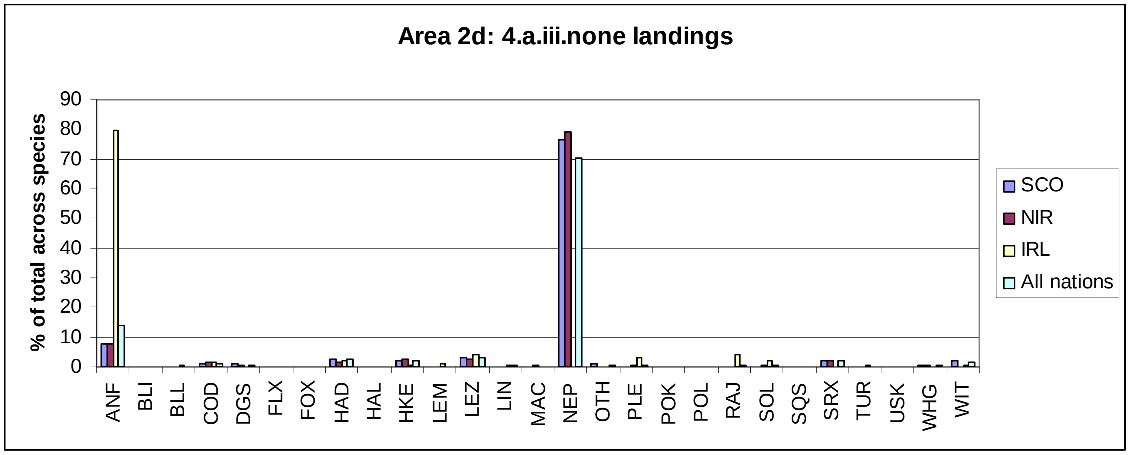


Figure 6.10.3.3 West of Scotland: 4.a.iii.none; Catch composition within gear category when data aggregated across nations and for top three nations using gear category. Scale represents % of overall catch within that category by the nation concerned.

Table 6.10.3.5 West of Scotland: 4.a.iv.IIA8d; Top five species in catch composition within gear category when data aggregated across nations and for top three nations using gear category.

				Ranked species by landings (ton)				
Category	Nation	% Effort in Category	2007 Landings	1	2	3	4	5
4.a.iv.IIA8d	All Nations		13371.8	POK (4018.4)	BSF (1935.4)	BLI (1715.5)	ANF (1352.9)	RNG (1270.4)
	FRA	91.96	12646.8	POK (3902.8)	BSF (1935.4)	BLI (1715.5)	ANF (1292.9)	RNG (1270.4)
	SCO	7.84	603.1	NEP (419.1)	ANF (59.9)	LEZ (31.0)	SRX (27.7)	HAD (17.7)
	GER	0.08	116.4	POK (112.7)	HKE (3.4)	LIN (0.2)	USK (0.1)	ANF (0.02)

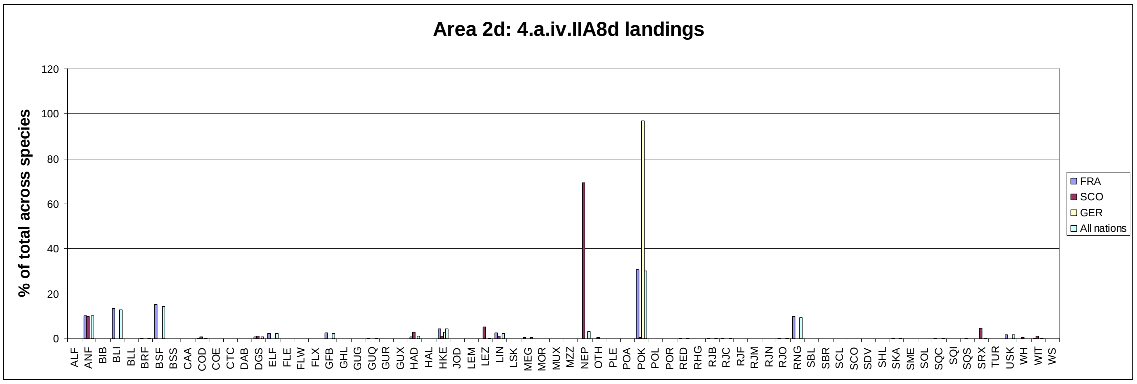


Figure 6.10.3.4 West of Scotland: 4.aiv.IIA8d; Catch composition within gear category when data aggregated across nations and for top three nations using gear category. Scale represents % of overall catch within that category by the nation concerned.

Table 6.10.3.6 West of Scotland: 4.a.iv.none; Top five species in catch composition within gear category when data aggregated across nations and for top three nations using gear category.

				Ranked species by landings (ton)				
Category	Nation	% Effort in Category	2007 Landings	1	2	3	4	5
4.a.iv.none	All Nations		3822.4	HAD (837.7)	ANF (780.1)	POK (720.5)	HKE (258.3)	LEZ (189.9)
	IRL	47.09	1439.0	HAD (607.7)	ANF (211.6)	HKE (146.1)	POK (136.5)	LEZ (77.1)
	FRA	33.26	1311.9	ANF (461.6)	POK (157.6)	RNG (141.0)	HKE (96.8)	BLI (95.7)
	SCO	17.71	637.4	HAD (185.9)	LEZ (110.1)	ANF (106.0)	NEP (62.2)	SRX (53.7)

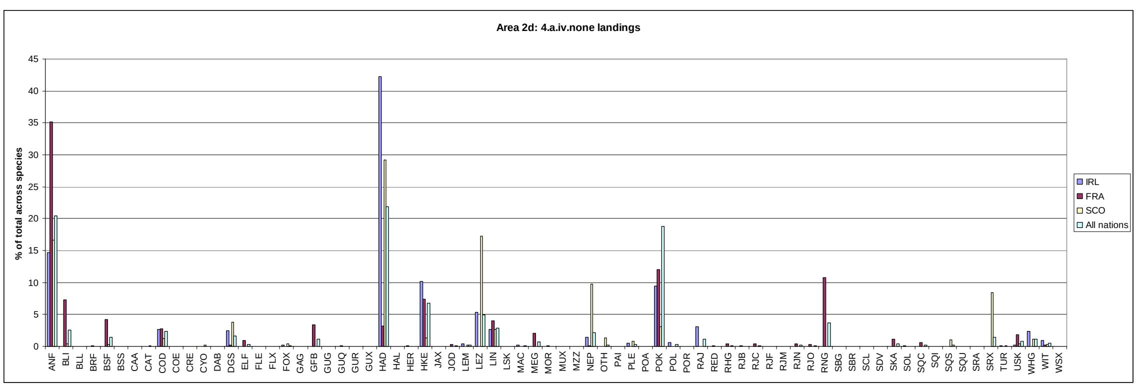


Figure 6.10.3.5 West of Scotland: 4.a.iv.none; Catch composition within gear category when data aggregated across nations and for top three nations using gear category. Scale represents % of overall catch within that category by the nation concerned.

Table 6.10.3.7 West of Scotland: 4.a.v.none; Top five species in catch composition within gear category when data aggregated across nations and for top three nations using gear category.

				Ranked species by landings (ton)				
Category	Nation	% Effort in Category	2007 Landings	1	2	3	4	5
4.a.v.none	All Nations		5269.4	HAD (1762.5)	POK (1140.2)	ANF (534.0)	LIN (327.9)	LEZ (278.6)
	SCO	97.87	5052.1	HAD (1760.3)	POK (959.7)	ANF (504.5)	LIN (327.5)	LEZ (278.5)
	IRL	1.59	35.1	ANF (29.4)	HAD (1.7)	DGS (1.3)	COD (0.8)	RAJ (0.6)
	ENG	0.43	96.0	POK (94.3)	HAD (0.5)	LIN (0.4)	COD (0.3)	HKE (0.3)

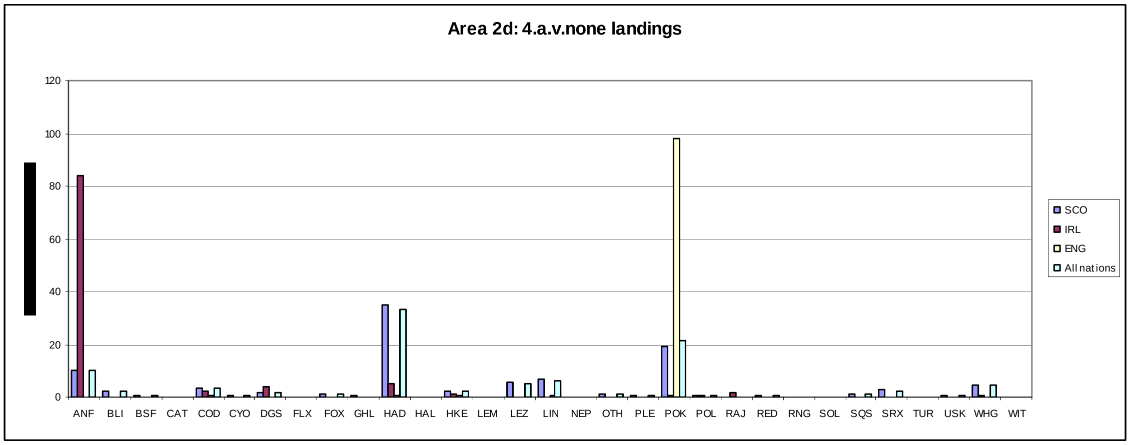


Figure 6.10.3.6 West of Scotland: 4.a.v.none; Catch composition within gear category when data aggregated across nations and for top three nations using gear category. Scale represents % of overall catch within that category by the nation concerned.

Table 6.10.3.8 West of Scotland: 4.a.v.IIA8d; Top five species in catch composition within gear category when data aggregated across nations and for top three nations using gear category.

				Ranked species by landings (ton)				
Category	Nation	% Effort in Cat	2007 Landings	1	2	3	4	5
4.a.v.IIA8d	All Nations		897.5	HAD (249.2)	ANF (158.9)	POK (127.5)	LIN (58.1)	HKE (56.3)
	SCO	99.18	896.3	HAD (249.2)	ANF (158.9)	POK (127.5)	LIN (58.1)	HKE (56.3)
	FRA	0.82	1.1	BLI (0.7)	RNG (0.1)	GUQ (0.1)	SKA (0.1)	BSF (0.1)
	-							

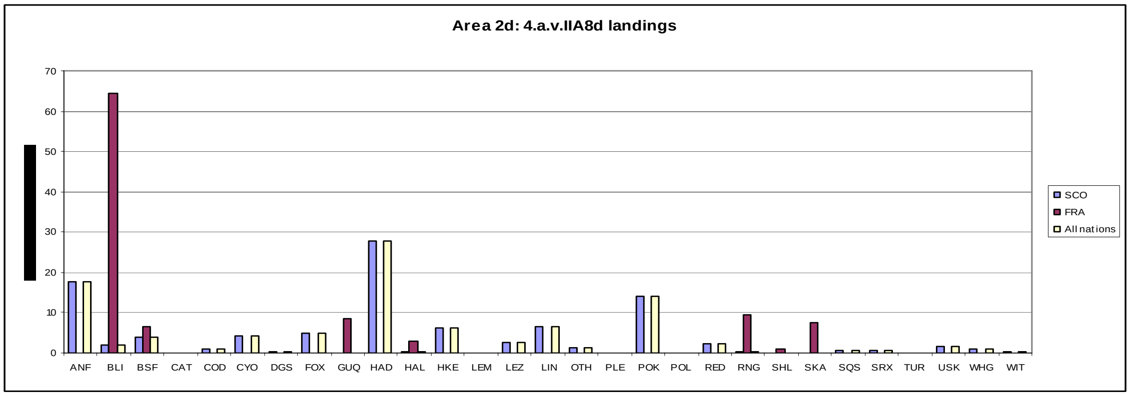


Figure 6.10.3.7 West of Scotland: 4.a.v.IIA8d; Catch composition within gear category when data aggregated across nations and for top three nations using gear category. Scale represents % of overall catch within that category by the nation concerned.

Table 6.10.3.9 West of Scotland: 4.e.none; Top five species in catch composition within gear category when data aggregated across nations and for top three nations using gear category.

				Ranked species by landings (ton)				
Category	Nation	% Effort in Category	2007 Landings	1	2	3	4	5
4.e.none	All Nations		3128.6	HKE (1938.9)	LIN (704.7)	OTH (216.7)	DGS (94.9)	SRX (41.3)
	SCO	40.48	1722.6	HKE (950.1)	LIN (448.5)	OTH (216.7)	FOX (36.4)	DGS (31.5)
	FRA	37.01	855.7	HKE (674.5)	LIN (160.2)	POA (4.8)	POK (4.4)	POL (3.2)
	ENG	22.52	550.3	HKE (314.3)	LIN (96.0)	DGS (63.3)	SRX (38.5)	USK (28.7)

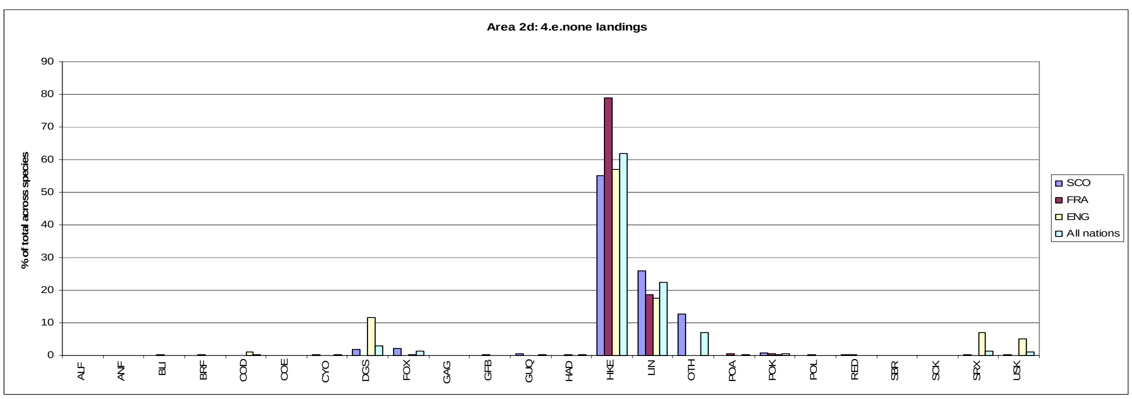


Figure 6.10.3.8 West of Scotland: 4.e.none; Catch composition within gear category when data aggregated across nations and for top three nations using gear category. Scale represents % of overall catch within that category by the nation concerned.

Table 6.10.3.10 West of Scotland: 4.none.none; Top five species in catch composition within gear category when data aggregated across nations and for top three nations using gear category.

				Ranked species by landings (ton)				
Category	Nation	% Effort in Category	2007 Landings	1	2	3	4	5
none none	All Nations		215429.1	MAC(100239.6)	WHB (40991.0)	HER (34575.9)	JAX (21368.6)	PAI (10193.2)
	SCO	64.15	92161.2	MAC (61503.9)	HER (11944.1)	WHB (11387.9)	OTH (6802.0)	NEP (451.1)
	IRL	19.16	54875.3	JAX (19163.9)	HER (14148.7)	MAC (11763.9)	PAI (8125.9)	WHB (1658.2)
	NIR	9.18	11001.6	MAC (6717.5)	HER (3122.6)	PAI (1160.9)	NEP (0.6)	-

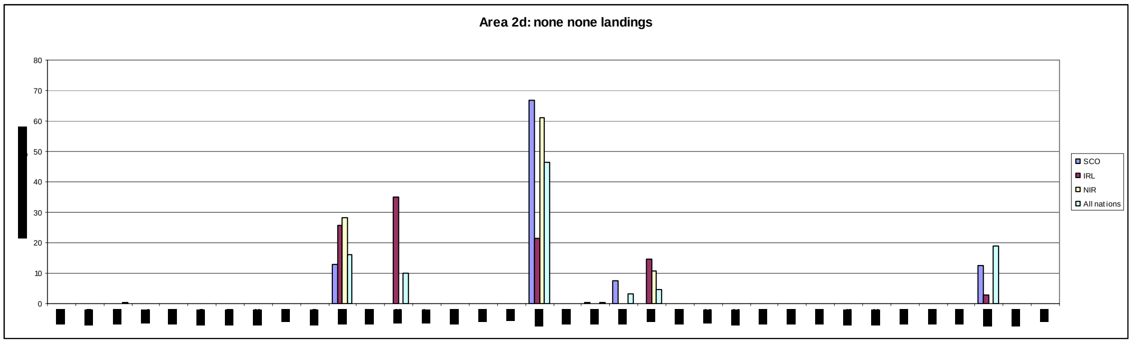


Figure 6.10.3.9 West of Scotland: 4.none.none; Catch composition within gear category when data aggregated across nations and for top three nations using gear category. Scale represents % of overall catch within that category by the nation concerned.

7. REVIEW OF ANNEX IIB OF REGULATION 40/2008 IN THE CONTEXT OF THE RECOVERY PLAN FOR SOUTHERN HAKE AND *NEPHROPS* (REGULATION 2166/2005)

7.1. General considerations regarding the derogations and special conditions

STECF-SGRST considers that Annex IIB of Council Reg. 40/2008 represents a fleet specific effort management regime which supports the southern hake and *Nephrops* recovery plan (Council Reg. 2166/2005). Annex IIB excludes the Gulf of Cádiz although this area is included as part of the definition of the stock area of southern hake and Iberian *Nephrops*.

STECF-SGRST notes that the classification of the trawl mesh size ≥32mm in Annex IIB mixes two clearly defined Portuguese fisheries. One fishery targets demersal fish species with mesh size 65-69mm, and the other targets crustaceans using two different mesh sizes (shrimps with mesh size 55-59mm and *Nephrops* with mesh size ≥70mm) with different licenses, operating in different fishing grounds and depth ranges. A clear identification of these mesh sizes in the effort regulation may provide more focused and efficient effort management.

STECF-SGRST notes that under the gears group indicated in point 3 of the Annex IIB there is a mixture of 10 different Spanish metiers: "baca", "jurelera", pair bottom trawl (PTB), "volanta", "rasco", "LLS-COE", "LLS-HKE", "LLS-POL", ("LLS-BSS") and "LLS-MIX".

Otter bottom trawl, with cod end mesh size of 65 mm, a vertical opening of 1.2-1.5 m and a wingspread of 22-25 m (metier "baca") targets demersal species while the same gear with a vertical opening of 5-5.5 m and wingspread of 18-20 m (metier "jurelera") targets horse mackerel and other pelagics (Fonseca et al., 2000).

PTB, with cod end mesh size between 45-55 mm (Fonseca et al., 2000), vertical opening of 25 m and a wingspread of 65 m, targets blue whiting (69% of the total catches) and hake (IBERMIX, 2007).

The gillnet fleet is divided in metier "volanta", with mesh size of 90 mm operating in depths between 100 and 400 and targeting hake and metier "rasco", with mesh size of 280 mm operating in depths between 100-800 m and catching anglerfish.

The longline fleet is divided by targets species: conger (metier "LLS-COE"), hake ("LLS-HKE"), pollack ("LLS-POL"), seabass ("LLS-BSS"), mixed fishery ("LLS-MIX"). The metier "LLS-HKE" represents only the 15% of the longline effort and is the only fishery targeting large hake of breeding size (IBERMIX, 2007).

STECF-SGRST considers that the use of fishing days (or kW*days) to manage effort of static gears such as gillnets and longlines is a very poor approximation of the effective effort and thus may put at risk the management goals. A possible way to improve the impact of the effort management towards an effective reduction in fishing mortality of static gears could be to enforce continuous closed periods so that fishermen will have to bring their gear ashore and stop fishing during certain periods.

STECF-SGRST notes the following changes in Annexes IIB to Council Reg. 40/2008 for 2008 as compared to the Annex IIB to 41/2007:

- The new regulation allows fishing in the areas defined in point 1 with the gears of the point 3 with a special fishing licence (point 4.1), while in the 2007 regulation fishing was not allowed in any case.
- Points 7.3 and 7.4 are added to the 2007 regulation relating to the "maximum number of days". These new points make reference to the management of the fishing effort allocations according to a kilowatt days system (7.3) and the conditions for a Member State (MS) to benefit from the provisions laid down in point 7.3 (7.4).
- In 2008 point 9.2 the details of the calculation must be based also "on the list of withdrawn vessels with their Community Fleet Register number (CFR) and their engine power".
- In 2008 point 10.1 is added "observers shall be independent from the owner of the vessel and shall not be a member of the fishing vessel crew".
- A point 10.4 is added, describing what the MS must do if it wishes to continue the application of a programme previously approved by the Commission without changes.
- In point 11.3, Table 1, the maximum number of days is 194 for all regulated gears (trawl, gillnet and longline) without special conditions.

The following Table 7.1.1 lists the historic developments of days at sea by vessel and derogations.

Table 7.1.1 Historic trends in days at sea by vessel specified in the Council Regulations since 2005.

Annex	AREA	REG GEAR	SPECON	2003	2004	2005	2006	2007	2008
IIB	8c9a	3a former 3ai and 3aii	none			264	240	216	194
IIB	8c9a	3a former 3ai and 3aii	IIB71ab			365	365	365	365
IIB	8c9a	3ai deleted	none			264	240		
IIB	8c9a	3ai deleted	IIB71ab			365	365		
IIB	8c9a	3aii deleted	none			264	240		
IIB	8c9a	3aii deleted	IIB71ab			365	365		
IIB	8c9a	3b former 3bi and 3bii	none			264	240	216	194
IIB	8c9a	3b former 3bi and 3bii	IIB71a			365	365	365	365
IIB	8c9a	3bi deleted	none			264	240		
IIB	8c9a	3bi deleted	IIB71a			365	365		
IIB	8c9a	3bii deleted	none			264	240		
IIB	8c9a	3bii deleted	IIB71a			365	365		
IIB	8c9a	3c	none			264	240	216	194
IIB	8c9a	3c	IIB71a			365	365	365	365

7.2. *Trend in effort 2000-2007 by derogation and by Member State*

Effort information in kW*days and GT*days was provided by Portugal, Spain, France, England, Scotland, Germany, Ireland and Netherlands in the Divisions 8c and 9a for the years 2000-2007. Spanish data only contains information from the trips with landings of hake.

Accordingly to Annex IIB of Regulation 40/2008 in the context of the recovery plan for southern hake and *Nephrops* stocks, fishing vessels with overall length above 10 meters that have trawl nets with mesh sizes >32 mm or gillnets > 60 mm or bottom longlines may be present within the area for a maximum of 194 days during 2008 (Table I of the Annex II B).

If, during 2001, 2002 and 2003 these vessels fished less than 5 tonnes of hake and 2.5 of *Nephrops* per year they do not have this effort limitation, but are obliged not to exceed the same amounts in 2008.

Tables 7.2.1-3 list the available effort data in terms of kW*days and GT*days by Member State. In addition to the 2007 regulation defined gear types 3.a (bottom trawler mesh size ≥32 mm), 3.b (gillnet ≥60 mm), 3.c (bottom longline) and the undefined (none), the tables include trammel nets under the coding “3t”, as they were found to contribute significantly to the static effort deployed.

Table 7.2.1 Trend in nominal effort (kW*days at sea) by Member State and existing derogations given in Table 1 of Annex IIB (Coun. Reg. 40/2008), 2000-2007. Derogations are sorted by gear, special condition (SPECON) and country. Data qualities are summarised in section 5.5.2 and Table 5.5.2.1. Note that the gear type 3t denotes the non-regulated (effort) trammel gear with all mesh sizes. Spanish data correspond only to the trips with hake landings and are not sorted by SPECON.

ANNEX	REG AREA COMB	REG GEAR	SPECON	COUNTRY	2000	2001	2002	2003	2004	2005	2006	2007
IIb	8c-9a	3a	IIB71ab	POR						8 245 672	6 432 995	9 354 332
IIb	8c-9a	3a	none	ENG				715	22 924			
IIb	8c-9a	3a	none	FRA	222 555	284 075	445 606	268 971	212 869	638 240	835 966	595 541
IIb	8c-9a	3a	none	IRL				10 451			6 020	
IIb	8c-9a	3a	none	NED			249 576	183 816	232 940	215 114	70 232	88 850
IIb	8c-9a	3a	none	POR			228 779	6 536 922	4 583 823	2 971 856	626 859	225 367
IIb	8c-9a	3a	n/a	SPN		20 645	9 966 238	9 259 903	2 597 975	877 178	770 681	5 743 945
IIb	8c-9a	3b	IIB71ab	POR						324 616	229 750	725 496
IIb	8c-9a	3b	none	ENG							14 083	
IIb	8c-9a	3b	none	FRA	6 328	7 800	5 785	3 641	29 178	143 018	70 201	114 471
IIb	8c-9a	3b	none	POR			11 179	178 091	29 350	191 382	189 811	212 172
IIb	8c-9a	3b	none	SCO							3 234	
IIb	8c-9a	3b	n/a	SPN		159	530 231	591 940	229 112	40 377	9 401	795 238
IIb	8c-9a	3c	IIB71ab	POR						82 726	74 596	91 549
IIb	8c-9a	3c	none	ENG				7 746				
IIb	8c-9a	3c	none	FRA	1 422		736	3 476	3 972	968	196	280
IIb	8c-9a	3c	none	IRL							2 156	2 351
IIb	8c-9a	3c	none	POR	54 800	11 290	42 890	227 279	63 786	193 798	192 684	329 537
IIb	8c-9a	3c	n/a	SPN			73 399	149 312	149 238	177 683	221 458	419 250
IIb	8c-9a	3t	none	FRA	4 108		10 494	5 074	525		810	
IIb	8c-9a	3t	none	POR	210 788	273 314	254 745	669 977	933 493	2 849 942	1 751 925	1 571 587
IIb	8c-9a	3t	none	SPN			75 391	79 074	148 002	127 040	136 315	165 713
IIb	8c-9a	none	none	FRA		2 871	2 944	4 784	25 150	3 973	3 242	4 506
IIb	8c-9a	none	none	GER								18 183
IIb	8c-9a	none	none	IRL		1 585	3 788	4 656	122			
IIb	8c-9a	none	none	NED			13 893			3 528	5 880	
IIb	8c-9a	none	none	POR	4 705 142	3 242 128	3 507 984	3 270 932	3 329 874	11 270 022	3 405 387	697 140
IIb	8c-9a	none	none	SPN	104	64	610 078	935 940	8 678 562	10 253 955	9 533 278	4 510 407

Table 7.2.2 Trend in effort (GT*days at sea) by Member State and existing derogations given in Table 1 of Annex IIB (Coun. Reg. 40/2008), 2000-2007. Derogations are sorted by gear, special condition (SPECON) and country. Data qualities are summarised in section 5.5.2 and Table 5.5.2.1. Note that the gear type 3t denotes the non-regulated (effort) trammel gear with all mesh sizes. Spanish data correspond only to the trips with hake landings and are not sorted by SPECON.

ANNEX	REG AREA COMB	REG GEAR	SPECON	COUNTRY	2 000	2001	2002	2003	2004	2005	2006	2007
IIb	8c-9a	3a	IIB71ab	POR						3 139 086	2 535 302	3 614 944
IIb	8c-9a	3a	none	ENG				252	8 252			
IIb	8c-9a	3a	none	FRA				45 895	36 270	119 829	158 018	102 074
IIb	8c-9a	3a	none	IRL				4 572			2 968	
IIb	8c-9a	3a	none	NED				162 742	214 074	196 996	77 646	87 297
IIb	8c-9a	3a	none	POR				2 589 131	1 836 648	1 230 190	232 089	91 551
IIb	8c-9a	3a	n/a	SPN		8 683	4 868 938	4 727 049	1 247 493	332 495	281 385	3 290 784
IIb	8c-9a	3b	IIB71ab	POR						106 204	62 332	188 374
IIb	8c-9a	3b	none	ENG							6 259	
IIb	8c-9a	3b	none	FRA				830	5 264	29 906	17 614	25 279
IIb	8c-9a	3b	none	POR				45 436	9 495	42 172	36 657	40 031
IIb	8c-9a	3b	none	SCO							1 440	
IIb	8c-9a	3b	n/a	SPN		71	176 828	204 995	85 002	9 713	2 482	258 976
IIb	8c-9a	3c	IIB71ab	POR						13 660	18 561	22 701
IIb	8c-9a	3c	none	ENG				3 450				
IIb	8c-9a	3c	none	FRA				638	1 044	171	15	38
IIb	8c-9a	3c	none	IRL							911	928
IIb	8c-9a	3c	none	POR				65 286	22 816	31 974	38 696	79 633
IIb	8c-9a	3c	n/a	SPN			18 244	45 714	47 034	46 616	55 512	117 979
IIb	8c-9a	3t	none	FRA				897	11		96	
IIb	8c-9a	3t	none	POR				177 051	242 291	707 954	416 248	375 690
IIb	8c-9a	3t	none	SPN			15 871	15 559	29 980	23 583	26 262	33 272
IIb	8c-9a	none	none	FRA				1 300	5 147	1 088	969	601
IIb	8c-9a	none	none	GER								8 228
IIb	8c-9a	none	none	IRL				1 606	50			
IIb	8c-9a	none	none	NED						1 216	2 476	
IIb	8c-9a	none	none	POR				1 000 769	1 044 434	3 618 720	1 046 388	137 702
IIb	8c-9a	none	none	SPN	35	9	227 588	419 716	4 496 905	5 458 218	5 355 623	2 498 663

Table 7.2.3 Trend in effort (maximum numbers of vessels over national fisheries and quarters) by Member State and existing derogations given in Table 1 of Annex IIB (Coun. Reg. 40/2008), 2000-2007. Derogations are sorted by gear, special condition (SPECON) and country. Data qualities are summarised in given in Section 5.5.2 and Table 5.5.2.1. Note that the gear type 3t denotes the non-regulated (effort) trammel gear with all mesh sizes. Vessel numbers by fleet from Spain were not available.

ANNEX	REG AREA	REG GEAR	SPECON	COUNTRY	2000	2001	2002	2003	2004	2005	2006	2007
IIb	8c-9a	3a	IIB71ab	POR						31	45	51
IIb	8c-9a	3a	none	ENG				1	2			
IIb	8c-9a	3a	none	FRA	8	12	30	45	6	14	55	35
IIb	8c-9a	3a	none	IRL				1	1		2	
IIb	8c-9a	3a	none	NED			7	3	6	5	2	1
IIb	8c-9a	3a	none	POR			3	31	24	19	12	7
IIb	8c-9a	3b	IIB71ab	POR						17	23	35
IIb	8c-9a	3b	none	ENG							1	
IIb	8c-9a	3b	none	FRA	3	1	3	2	2	4	5	5
IIb	8c-9a	3b	none	POR			1	9	7	14	22	23
IIb	8c-9a	3b	none	SCO							1	
IIb	8c-9a	3c	IIB71ab	POR						8	11	11
IIb	8c-9a	3c	none	ENG				1				
IIb	8c-9a	3c	none	FRA	1		1	1	1	1	1	1
IIb	8c-9a	3c	none	IRL							1	1
IIb	8c-9a	3c	none	POR	2	2	4	13	6	21	33	35
IIb	8c-9a	3t	none	FRA	1		1	1	1		1	
IIb	8c-9a	3t	none	POR	14	17	17	42	41	59	69	88
IIb	8c-9a	none	none	FRA		2	1	1	3	1	1	1
IIb	8c-9a	none	none	GER								2
IIb	8c-9a	none	none	IRL		1	4	1	1			
IIb	8c-9a	none	none	NED			1			1	2	
IIb	8c-9a	none	none	POR	40	30	38	45	36	48	53	45

The Tables 7.2.4-6 list the trend in effort by derogation since 2000 in terms of kW*days at sea, GT*days at sea and number of vessel, respectively. Spanish data correspond only to the trips with hake landings and are not sorted by SPECON.

Since 2000, half (56% of average) of the available kW*days data were assigned to other gears than the regulated ones ("3t" and "none" gears), of which trammel nets ("3t") contribute 5% to the overall effort deployed. The high amount of undefined gears ("none" group) is due to a high amount of data lacking gear or mesh size information.

Among the effort regulated gears ("3a", "3b" and "3c"), the bottom trawls ≥32mm (3.a) assigned to "special conditions" (2003-2007) represented 28% of total effort, while the SPECON gill nets ≥60mm (3.b) and bottom long-lines (3.c) remained below 2%. Similar trends can be seen in the effort data in units of GT*days at sea.

Table 7.2.4 Trend in nominal effort (kW*days at sea) by derogations given in Table 1 of Annex IIB (Coun. Reg. 40/2008), 2000-2007. Derogations are sorted by gear and special condition (SPECON). Data qualities are summarised in section 5.5.2 and Table 5.5.2.1. Note that the gear type 3t denotes the non-regulated (effort) trammel gear with all mesh sizes. Spanish data correspond only to the trips with hake landings and are not sorted by SPECON.

ANNEX	REG AREA COMB	REG GEAR	SPECON	2 000	2 001	2 002	2 003	2 004	2 005	2 006	2 007
IIb	8c-9a	3a	IIB71ab						8 245 672	6 432 995	9 354 332
IIb	8c-9a	3a	none	222 555	304 720	10 890 199	16 260 778	7 650 531	4 702 388	2 309 758	6 653 703
IIb	8c-9a	3b	IIB71ab						324 616	229 750	725 496
IIb	8c-9a	3b	none	6 328	7 959	547 195	773 672	287 640	374 777	286 730	1 121 881
IIb	8c-9a	3c	IIB71ab						82 726	74 596	91 549
IIb	8c-9a	3c	none	56 222	11 290	117 025	387 813	216 996	372 449	416 494	751 418
IIb	8c-9a	3t	none	214 896	273 314	340 630	754 125	1 082 020	2 976 982	1 889 050	1 737 300
IIb	8c-9a	none	none	4 705 246	3 246 648	4 138 687	4 216 312	12 033 708	21 531 478	12 947 787	5 230 236

Table 7.2.5 Trend in effort (GT*days at sea) by derogations given in Table 1 of Annex IIB (Coun. Reg. 40/2008), 2000-2007. Derogations are sorted by gear and special condition (SPECON). Data qualities are summarised in section 5.5.2 and Table 5.5.2.1. Note that the gear type 3t denotes the non-regulated (effort) trammel gear with all mesh sizes. Spanish data correspond only to the trips with hake landings and are not sorted by SPECON.

ANNEX	REG AREA COMB	REG GEAR	SPECON	2 000	2 001	2 002	2 003	2 004	2 005	2 006	2 007
IIb	8c-9a	3a	IIB71ab						3 139 086	2 535 302	3 614 944
IIb	8c-9a	3a	none		8 683	4 868 938	7 529 641	3 342 737	1 879 510	752 106	3 571 706
IIb	8c-9a	3b	IIB71ab						106 204	62 332	188 374
IIb	8c-9a	3b	none		71	176 828	251 261	99 761	81 791	64 452	324 286
IIb	8c-9a	3c	IIB71ab						13 660	18 561	22 701
IIb	8c-9a	3c	none			18 244	115 088	70 894	78 761	95 134	198 578
IIb	8c-9a	3t	none			15 871	193 507	272 282	731 537	442 606	408 962
IIb	8c-9a	none	none	35	9	227 588	1 423 391	5 546 536	9 079 242	6 405 456	2 645 194

Table 7.2.6 Trend in effort (number of vessels, sum over maximum number of national vessels) by derogations given in Table 1 of Annex IIB (Coun. Reg. 40/2008),, 2000-2007. Derogations are sorted by gear and special condition (SPECON). Data qualities are summarised in given in Section 5.5.2 and Table 5.5.2.1. Note that the gear type 3t denotes the non-regulated (effort) trammel gear with all mesh sizes. Vessel numbers by fleet from Spain were not available.

ANNEX	REG AREA COMB	REG GEAR	SPECON	2000	2001	2002	2003	2004	2005	2006	2007
IIb	8c-9a	3a	IIB71ab						31	45	51
IIb	8c-9a	3a	none	8	12	40	81	39	38	71	43
IIb	8c-9a	3b	IIB71ab						17	23	35
IIb	8c-9a	3b	none	3	1	4	11	9	18	29	28
IIb	8c-9a	3c	IIB71ab						8	11	11
IIb	8c-9a	3c	none	3	2	5	15	7	22	35	37
IIb	8c-9a	3t	none	15	17	18	43	42	59	70	88
IIb	8c-9a	none	none	40	33	44	47	40	50	56	48

7.3. Trend in catch estimates 2003-2007 by derogation in management areas 8c and 9a

Portugal and Spain provided data on 2003-2007 landings, data from the former included information about special conditions. Spanish data include both trips with and without hake landings and from 2003 to 2005 contain also Gulf of Cádiz information. As mesh size ranges and the classification by special condition were not available for Spanish landings, Spanish otter and gillnet data were included in the “none” group instead of being assigned to “3a” and “3b” groups. Portugal included a breakdown by age for hake, horse mackerel, mackerel, Spanish mackerel and blue whiting. Discard data were not available.

The lack of aggregation by special conditions in the Spanish data and any quantification of discards prevent any precise evaluation of the derogations defined in Annex IIB of Council Reg. 40/2008.

The contributions of the individual derogations to the overall landings can be taken from Tables 7.3.1. For brevity, the following sections represent the landings and discards by derogation in weight restricted to the following species, monk (ANF), hake (HKE), *Nephrops* (NEP), horse mackerel (JAX), mackerel (MAC), *Penaeus* shrimps (PEN), rays (RAJ) and blue whiting (WHB). However, additional data queries for other species can be provided depending on data provisions of the national catches by the experts or national institutes. The data given in the table form the basis of the Figures 7.3.1 displaying the relative catch compositions by derogations for the years 2003-2007. The lack of dark bars (representing discards) further indicates that data were not provided.

STECF-SGRST notes that on average 76% of the hake landings and 35% of the *Nephrops*’ have not been assigned to the regulated gears or trammel between 2003 and 2007. Among the hake landings that could have been assigned to the regulated gears, 57% came from bottom trawls of mesh size ≥32mm, 24% from gill nets of mesh size ≥60mm and 19% from bottom longlines (2003-2007 averages). SGRST notes that 4% of the hake landings in 2003-2007 came from the non-regulated trammel nets. Among the *Nephrops* landings that could have been assigned to the regulated gears, 99.8% came from bottom trawls of mesh size ≥32mm.

Bottom trawls >32 mm (3.a) catch mainly blue whiting (51% of the landings of the selected species between 2003 and 2007) and mackerel (23%); hake represents 14% of the landings and *Nephrops* 7%. The gill nets (3.b) and the longlines (3.c) are more species selective towards hake (76% and 56% of the landings respectively). Also the unregulated trammel nets are distinguished by a clear species selectivity towards targeting monk (44%) and hake (32%). Other unregulated gears fish mainly horse mackerel (34%), mackerel (33%) and blue whiting (26%); and 6% and 0% of hake and *Nephrops*, respectively.

Considering only 2006 and 2007 data (data without the Gulf of Cádiz) the percentage of hake in the landings is slightly higher in the regulated gears.

Tab. 7.3.1 (I) Landings (t), discards (t) and relative discard rates by species and derogation, 2003-2007. Regulation gears codes according to the EC Council Regulation No 41/2007: 3a) bottom trawls of mesh size ≥ 32 mm, 3b) gill-nets of mesh size ≥ 60 mm, 3c) bottom long-lines. Spanish otter and gillnet data are not in "3a" and "3b" groups, are in "none" group. Gear type "3t" denotes the non-regulated (effort) trammel gear with all mesh sizes, gear type "none" contains other gears and the gears not allocated.

REG AREA	SPECIES	YEAR	REG GEAR	SPECON	LANDINGS	DISCARDS	DISC RATE BY GEAR
8c-9a	ANF	2003	3a	none	89		
8c-9a	ANF	2003	3b	none	16		
8c-9a	ANF	2003	3c	none	29		
8c-9a	ANF	2003	3t	none	131		
8c-9a	ANF	2003	none	none	495		
8c-9a	ANF	2004	3a	none	93		
8c-9a	ANF	2004	3b	none	57		
8c-9a	ANF	2004	3c	none	5		
8c-9a	ANF	2004	3t	none	279		
8c-9a	ANF	2004	none	none	597		
8c-9a	ANF	2005	3a	IIB71ab	14		
8c-9a	ANF	2005	3a	none	155		
8c-9a	ANF	2005	3b	IIB71ab	15		
8c-9a	ANF	2005	3b	none	50		
8c-9a	ANF	2005	3c	none	2		
8c-9a	ANF	2005	3t	none	232		
8c-9a	ANF	2005	none	none	861		
8c-9a	ANF	2006	3a	IIB71ab	41		
8c-9a	ANF	2006	3a	none	44		
8c-9a	ANF	2006	3b	IIB71ab	11		
8c-9a	ANF	2006	3b	none	7		
8c-9a	ANF	2006	3c	none	1		
8c-9a	ANF	2006	3t	none	202		
8c-9a	ANF	2006	none	none	1 538		
8c-9a	ANF	2007	3a	IIB71ab	154		
8c-9a	ANF	2007	3a	none	12		
8c-9a	ANF	2007	3b	IIB71ab	36		
8c-9a	ANF	2007	3b	none	8		
8c-9a	ANF	2007	3c	none	10		
8c-9a	ANF	2007	3t	none	118		
8c-9a	ANF	2007	none	none	1 438		
8c-9a	HKE	2003	3a	none	243		
8c-9a	HKE	2003	3b	none	53		
8c-9a	HKE	2003	3c	none	98		
8c-9a	HKE	2003	3t	none	93		
8c-9a	HKE	2003	none	none	4 127		
8c-9a	HKE	2004	3a	none	229		
8c-9a	HKE	2004	3b	none	44		
8c-9a	HKE	2004	3c	none	76		
8c-9a	HKE	2004	3t	none	191		
8c-9a	HKE	2004	none	none	1 253		
8c-9a	HKE	2005	3a	IIB71ab	267		
8c-9a	HKE	2005	3a	none	118		
8c-9a	HKE	2005	3b	IIB71ab	61		
8c-9a	HKE	2005	3b	none	177		
8c-9a	HKE	2005	3c	none	109		
8c-9a	HKE	2005	3t	none	134		
8c-9a	HKE	2005	none	none	2 726		
8c-9a	HKE	2006	3a	IIB71ab	552		
8c-9a	HKE	2006	3a	none	88		
8c-9a	HKE	2006	3b	IIB71ab	125		
8c-9a	HKE	2006	3b	none	111		
8c-9a	HKE	2006	3c	none	225		
8c-9a	HKE	2006	3t	none	256		
8c-9a	HKE	2006	none	none	4 557		
8c-9a	HKE	2007	3a	IIB71ab	703		
8c-9a	HKE	2007	3a	none	63		
8c-9a	HKE	2007	3b	IIB71ab	506		
8c-9a	HKE	2007	3b	none	186		
8c-9a	HKE	2007	3c	none	238		
8c-9a	HKE	2007	3t	none	58		
8c-9a	HKE	2007	none	none	3 613		
8c-9a	JAX	2003	3c	none	4		

Tab. 7.3.1 (continued)

REG AREA	SPECIES	YEAR	REG GEAR	SPECON	LANDINGS	DISCARDS	DISC RATE BY GEAR
8c-9a	JAX	2003	3t	none	2		
8c-9a	JAX	2003	none	none	12 828		
8c-9a	JAX	2004	3a	none	1		
8c-9a	JAX	2004	3c	none	5		
8c-9a	JAX	2004	3t	none	8		
8c-9a	JAX	2004	none	none	15 360		
8c-9a	JAX	2005	3c	none	4		
8c-9a	JAX	2005	3t	none	7		
8c-9a	JAX	2005	none	none	12 555		
8c-9a	JAX	2006	3c	none	14		
8c-9a	JAX	2006	3t	none	10		
8c-9a	JAX	2006	none	none	31 141		
8c-9a	JAX	2007	3c	none	7		
8c-9a	JAX	2007	3t	none	21		
8c-9a	JAX	2007	none	none	31 408		
8c-9a	MAC	2003	3a	none	708		
8c-9a	MAC	2003	3b	none	1		
8c-9a	MAC	2003	3c	none	6		
8c-9a	MAC	2003	3t	none	33		
8c-9a	MAC	2003	none	none	8 974		
8c-9a	MAC	2004	3a	none	632		
8c-9a	MAC	2004	3b	none	0		
8c-9a	MAC	2004	3c	none	62		
8c-9a	MAC	2004	3t	none	31		
8c-9a	MAC	2004	none	none	10 743		
8c-9a	MAC	2005	3a	IIB71ab	485		
8c-9a	MAC	2005	3a	none	165		
8c-9a	MAC	2005	3b	IIB71ab	0		
8c-9a	MAC	2005	3b	none	0		
8c-9a	MAC	2005	3c	none	92		
8c-9a	MAC	2005	3t	none	33		
8c-9a	MAC	2005	none	none	16 499		
8c-9a	MAC	2006	3a	IIB71ab	354		
8c-9a	MAC	2006	3a	none	86		
8c-9a	MAC	2006	3b	IIB71ab	5		
8c-9a	MAC	2006	3b	none	1		
8c-9a	MAC	2006	3c	none	45		
8c-9a	MAC	2006	3t	none	24		
8c-9a	MAC	2006	none	none	35 391		
8c-9a	MAC	2007	3a	IIB71ab	732		
8c-9a	MAC	2007	3a	none	75		
8c-9a	MAC	2007	3b	IIB71ab	8		
8c-9a	MAC	2007	3b	none	4		
8c-9a	MAC	2007	3c	none	140		
8c-9a	MAC	2007	3t	none	29		
8c-9a	MAC	2007	none	none	37 538		
8c-9a	NEP	2003	3a	none	198		
8c-9a	NEP	2003	3c	none	0		
8c-9a	NEP	2003	3t	none	0		
8c-9a	NEP	2003	none	none	84		
8c-9a	NEP	2004	3a	none	163		
8c-9a	NEP	2004	3c	none	0		
8c-9a	NEP	2004	3t	none	0		
8c-9a	NEP	2004	none	none	46		
8c-9a	NEP	2005	3a	IIB71ab	67		
8c-9a	NEP	2005	3a	none	143		
8c-9a	NEP	2005	3b	IIB71ab	1		
8c-9a	NEP	2005	3b	none	0		
8c-9a	NEP	2005	3c	none	0		
8c-9a	NEP	2005	3t	none	1		
8c-9a	NEP	2005	none	none	160		
8c-9a	NEP	2006	3a	IIB71ab	212		
8c-9a	NEP	2006	3a	none	35		

Tab. 7.3.1 (continued)

REG AREA	SPECIES	YEAR	REG GEAR	SPECON	LANDINGS	DISCARDS	DISC RATE BY GEAR
8c-9a	NEP	2006	3b	IIB71ab	0		
8c-9a	NEP	2006	3b	none	0		
8c-9a	NEP	2006	3c	none	0		
8c-9a	NEP	2006	3t	none	1		
8c-9a	NEP	2006	none	none	233		
8c-9a	NEP	2007	3a	IIB71ab	274		
8c-9a	NEP	2007	3a	none	15		
8c-9a	NEP	2007	3b	IIB71ab	1		
8c-9a	NEP	2007	3b	none	0		
8c-9a	NEP	2007	3c	none	0		
8c-9a	NEP	2007	3t	none	0		
8c-9a	NEP	2007	none	none	131		
8c-9a	PEN	2003	none	none	10		
8c-9a	PEN	2004	none	none	3		
8c-9a	PEN	2005	3t	none	0		
8c-9a	PEN	2005	none	none	3		
8c-9a	PEN	2006	none	none	10		
8c-9a	PEN	2007	3t	none	0		
8c-9a	PEN	2007	none	none	1		
8c-9a	RAJ	2003	3c	none	5		
8c-9a	RAJ	2003	3t	none	17		
8c-9a	RAJ	2003	none	none	29		
8c-9a	RAJ	2004	3c	none	5		
8c-9a	RAJ	2004	3t	none	18		
8c-9a	RAJ	2004	none	none	28		
8c-9a	RAJ	2005	3c	none	5		
8c-9a	RAJ	2005	3t	none	20		
8c-9a	RAJ	2005	none	none	31		
8c-9a	RAJ	2006	3c	none	18		
8c-9a	RAJ	2006	3t	none	112		
8c-9a	RAJ	2006	none	none	336		
8c-9a	RAJ	2007	3c	none	19		
8c-9a	RAJ	2007	3t	none	116		
8c-9a	RAJ	2007	none	none	355		
8c-9a	WHB	2003	3a	none	1 257		
8c-9a	WHB	2003	3b	none	0		
8c-9a	WHB	2003	3c	none	10		
8c-9a	WHB	2003	3t	none	1		
8c-9a	WHB	2003	none	none	8 170		
8c-9a	WHB	2004	3a	none	967		
8c-9a	WHB	2004	3c	none	19		
8c-9a	WHB	2004	3t	none	1		
8c-9a	WHB	2004	none	none	12 318		
8c-9a	WHB	2005	3a	IIB71ab	798		
8c-9a	WHB	2005	3a	none	377		
8c-9a	WHB	2005	3b	IIB71ab	2		
8c-9a	WHB	2005	3c	none	11		
8c-9a	WHB	2005	3t	none	3		
8c-9a	WHB	2005	none	none	14 858		
8c-9a	WHB	2006	3a	IIB71ab	1 567		
8c-9a	WHB	2006	3a	none	33		
8c-9a	WHB	2006	3b	IIB71ab	0		
8c-9a	WHB	2006	3b	none	0		
8c-9a	WHB	2006	3c	none	17		
8c-9a	WHB	2006	3t	none	3		
8c-9a	WHB	2006	none	none	21 029		
8c-9a	WHB	2007	3a	IIB71ab	3 284		
8c-9a	WHB	2007	3a	none	48		
8c-9a	WHB	2007	3b	IIB71ab	0		
8c-9a	WHB	2007	3b	none	0		
8c-9a	WHB	2007	3c	none	21		
8c-9a	WHB	2007	3t	none	1		
8c-9a	WHB	2007	none	none	19 071		

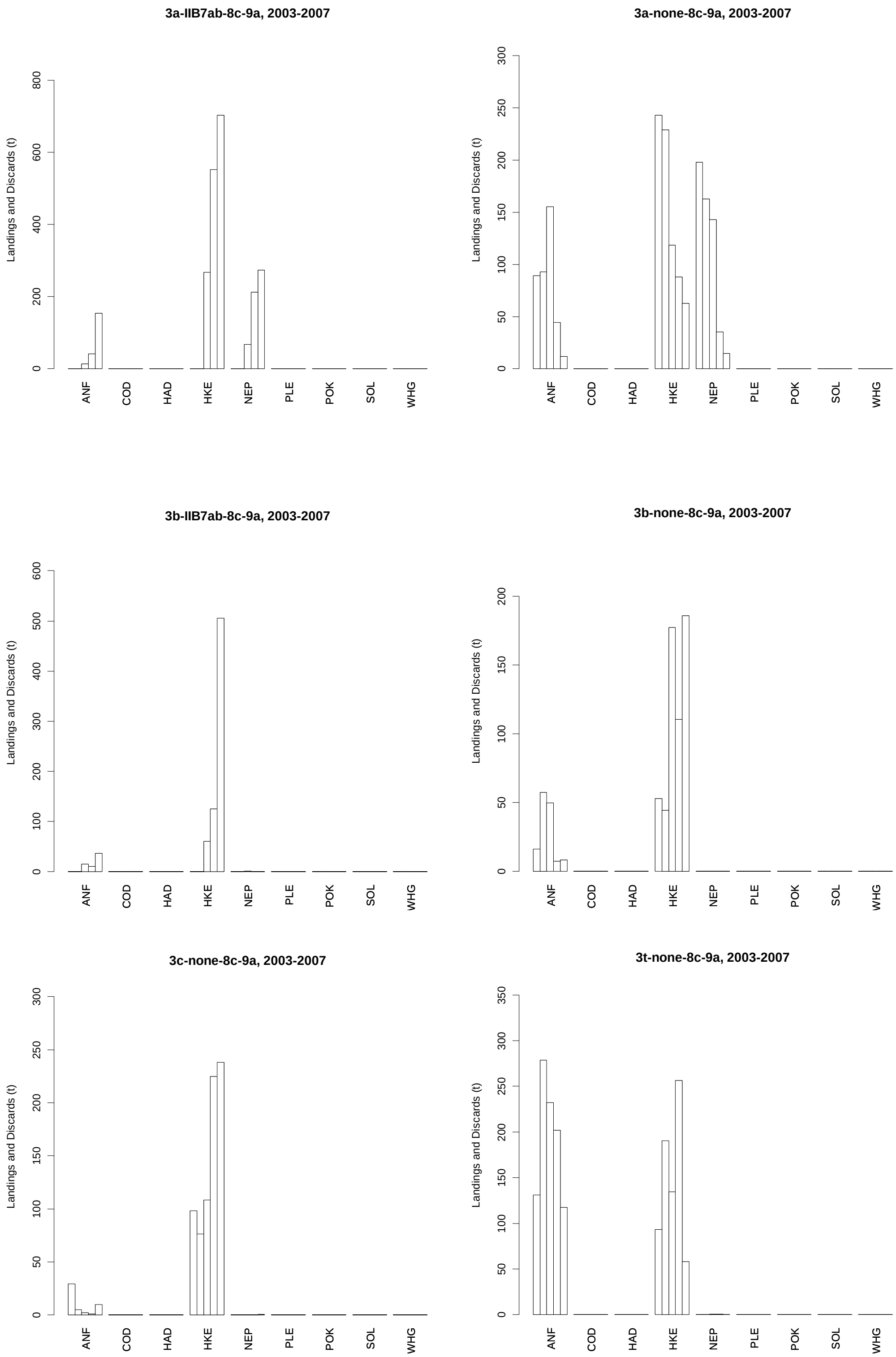


Fig. 7.3.1 Landings (t) and discard (t) by derogation and species, 2003-2007 (from left to right). Spanish otter and gillnet data are not in “3a” and “3b” groups, are in “none” group. The lack of discard information in the graphs means rather no information than zero discards. Note that the gear type 3t denotes the non-regulated (effort) trammel gear with all mesh sizes

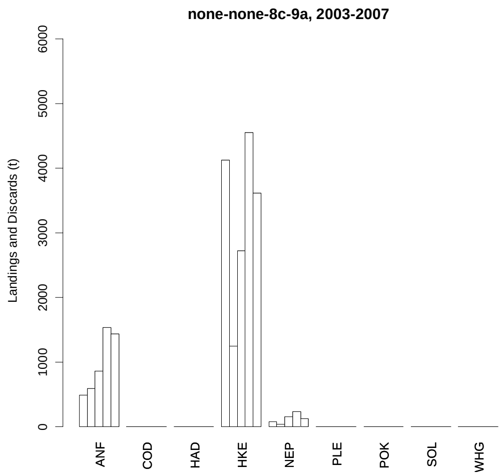


Fig. 7.3.1 continued

7.4. Trend in CPUE of hake and Norway lobster

STECF-SGRST notes that the uncertain gear definition and the lack of the required information about discards did not allow CPUE evaluation.

7.5. Ranked derogations according to relative contributions to hake and Nephrops catches

The uncertain gear definition and the general lack of discard information regarding the fisheries in ICES Div. 8c and 9a prevents a precise review of the effects of the regulated gears. The ranked derogations according to contributions of the defined derogations and the non-regulated gears to the hake and *Nephrops* landings in weight are listed in Table 7.5.1.

The otter trawls and gillnet (3a+3b+none) dominate the landings of hake and *Nephrops* in weight (76% and 100% on average), while bottom longlines and the non-regulated trammel gear (3.t) contributes with a 4% of the total hake landings each one.

Table 7.5.1 Ranked derogations according to relative hake and *Nephrops* catches in weight (t) in area 8c9a, 2003-2007 6. Ranking is according to the year 2007 (no discard information). Spanish otter and gillnet landings are in “none” regulated gear category.

SPECIES	REG_AREA	REG_GEAR	SPECON	2003	2004	2005	2006	2007
HKE	8c-9a	none	none	0.89	0.70	0.76	0.77	0.67
HKE	8c-9a	3a	IIB71ab	-	-	0.07	0.09	0.13
HKE	8c-9a	3b	IIB71ab	-	-	0.02	0.02	0.09
HKE	8c-9a	3c	none	0.02	0.04	0.03	0.04	0.04
HKE	8c-9a	3b	none	0.01	0.02	0.05	0.02	0.03
HKE	8c-9a	3a	none	0.05	0.13	0.03	0.01	0.01
HKE	8c-9a	3t	none	0.02	0.11	0.04	0.04	0.01
NEP	8c-9a	3a	IIB71ab	-	-	0.18	0.44	0.65
NEP	8c-9a	none	none	0.30	0.22	0.43	0.48	0.31
NEP	8c-9a	3a	none	0.70	0.78	0.38	0.07	0.03
NEP	8c-9a	3b	IIB71ab	-	-	0.00	0.00	0.00
NEP	8c-9a	3c	none	0.00	0.00	0.00	0.00	0.00
NEP	8c-9a	3t	none	0.00	0.00	0.00	0.00	0.00
NEP	8c-9a	3b	none	-	-	0.00	0.00	0.00

7.6. *Unregulated gears*

Detailed information on unregulated gears is presented in Table 7.6.1

Table 7.6.1

ANNEX	REG AREA	REG GEAR	Gear code	Mesh size	2000	2001	2002	2003	2004	2005	2006	2007
IIb	8c-9a	none	OTTER	none	4247986	2721954	3122882	2951558	10463753	17552102	10693811	3402243
IIb	8c-9a	none	GILL	none	370877	442898	710924	817694	1279146	2883950	1690594	726613
IIb	8c-9a	none	OTTER	<16			32665	49193	6909	2247	10008	348254
IIb	8c-9a	none	POTS	10-30				18360	1271	106296	118157	340083
IIb	8c-9a	none	POTS	none	71125	77276	89898	215719	188842	783088	343862	267017
IIb	8c-9a	none	TRAMMEL	none	210788	273314	288645	582421	1011280	2295080	1231386	118282
IIb	8c-9a	none	none	none			140837	98891	97592	74203	51484	73074
IIb	8c-9a	none	PEL_SEINE	none	15258		4660	40649	42041	170275	64163	60951
IIb	8c-9a	none	GILL	50-59			4988	3832	1463		735	30566
IIb	8c-9a	none	POTS	50-59				567		780	4474	15774
IIb	8c-9a	none	GILL	31-49			40435	25931	7928	470		6333
IIb	8c-9a	none	BEAM	none		29	226	4207	1261	2172	5608	5000
IIb	8c-9a	none	GILL	10-30		64	14707	17409	8633	225		4237
IIb	8c-9a	none	PEL_SEINE	16-31	316		595	184	131			1117
IIb	8c-9a	none	PEL_TRAWL	16-31	27936	8791		3276		2163	14750	957
IIb	8c-9a	none	PEL_SEINE	<16	3911	628	70	818	1180		292	727
IIb	8c-9a	none	BEAM	<16			794	625				637
IIb	8c-9a	none	OTTER	16-31			2830			735	129	230
IIb	8c-9a	none	DEM_SEINE	none							54	135
IIb	8c-9a	none	DREDGE	none				261		1187	11312	118
IIb	8c-9a	none	BEAM	>=120			44					
IIb	8c-9a	none	BEAM	32-54			279					
IIb	8c-9a	none	BEAM	80-89			7355					
IIb	8c-9a	none	PEL_TRAWL	<16		1324			307			
IIb	8c-9a	none	PEL_TRAWL	none		4456	3788	2195	122	187		

7.7. *Sampling plans, fishing effort and catches (landings and discards) of hake, Nephrops and associated species of vessels <10m*

Since 2003 Portugal has carried out a specific sampling plan to collect data on the activity of the small scale fleet (<10m vessels) operating in continental waters. The data is collected with a stratified random strategy by skippers' interviews, and provides information about catches by species and effort. This sampling plan is under the scope of Reg.(EC) 1639/2001 and the results were presented on the annual reports requested by the DGFish. There were, however, no data provided to STECF-SGRST.

7.8. Spatial distribution patterns of effective fishing effort of trawled gears 2003-2006

No information was available from national case studies or from data provided to STECF-SGRST for a review of spatial information.

7.9. References

Fonseca P., Campos A., Garcia A., Cardador F., Meixide M., Padín A., Theret F., Mellita M., and Morandeau, F. 2000. Trawl Selectivity Studies in Region 3. Study Contract Nº 96/61; Final Report.

Abad, E; I. Artetxe; F. Cardador; J. Castro (coordinator); D. García; M. Marín; A. Murta; A. Punzón; I. Quincoces; M. Santurtún; C. Silva; L. Silva. 2007. Identification and segmentation of mixed- species fisheries operating in the atlantic iberian peninsula waters. **IBERMIX** project (Contract Ref.: FISH/2004/03- 33).

8. REVIEW OF ANNEX IIC OF REGULATION 40/2008 IN THE CONTEXT OF THE RECOVERY OF WESTERN CHANNEL SOLE (PROPOSAL COM (2003) 819 FINAL)

8.1. General considerations regarding the derogations and special conditions

STECF-SGRST notes that assignment of derogations and special conditions is based on best expert knowledge. Data errors may exist regarding the huge data bases and the special knowledge required to deal with them (grouping and exact formulation of data queries).

STECF-SGRST last year noted a change in Annexes IIC to Council Reg. 41/2007 for 2007 as compared to the Annex IIC to 51/2006 which removed the special conditions IIC71a and IIC71b to static nets <220mm (3b) .

STECF-SGRST further notes that there were no special derogations added to Annex IIC of Council Reg. 40/2008.

The following Table 8.1.1 lists the historic developments of days at sea by vessel and derogations.

Table 8.1.1 – Western Channel - Historic trends in days at sea by vessel specified in the Council Regulations since 2005.

Annex	AREA	REG GEAR	SPECON	2003	2004	2005	2006	2007	2008
IIC	7e	3a	none			240	216	192	192
IIC	7e	3b	none			240	216	192	192
IIC	7e	3b deleted	ICC71ab				365		

8.2. Trend in effort 2000-2007 by derogation and by Member State

The dominating fleet from the 2 existing derogations in 7e (3a and 3b) is by far the English beam trawl fleet with percentages in excess of 68% of the effort deployed (Table 8.2.1 and Figure 8.2.1). The other fleets involved are the French static gear fleet with about 10% of the deployed effort and the Belgian beam trawl fleet with an increasing trend from less then 1% in 2000 up to about 10% in 2007. STECF-SGRST however notes that about 85% of the overall effort deployed could not be allocated to regulated gear (e.g. lack of mesh size, otter- and pelagic trawls). The “total” trend in Figure 8.2.1 is therefore highly influenced by none regulated gear group. The composition of the unregulated gears can be found in section 8.6.

Table 8.2.2 indicate that the dominating fleet in deployed GT*days at sea for the regulated gears is again the English beam trawl fleet with about 75% of the deployed GT*days at sea. The Belgian beam trawl fleet is responsible for around 15% and the static gear from England and France each for about 5%. Again STECF-SGRST notes that about 85% of the GT*days at sea is deployed by unregulated gears under Annex IIc and that the “total” trend in Figure 8.2.2 is therefore highly influenced by none regulated gear group.

Table 8.2.3 and Figure 8.2.3 show the number of vessels active in area 7e (maximum number of national vessels over national fisheries). About 70% of the vessels are allocated to non-regulated derogations, partly due to the absence of mesh sizes. Therefore, it was decided that the number of vessels in the regulated fisheries are not representing the correct number of the active vessels in the regulated fisheries but rather underestimated.

The trends in the nominal effort of the 2 derogations (3a and 3b) are illustrated in Table 8.2.4. The beam trawl fleets increased to about 20% above the 2002 level since 2004. In 2007 it dropped to 16% above the 2002 level. The static nets increased steadily over the time series to about 15% above the 2002 level in the years 2003-2005. Since then this category dropped sharply to 32% under the 2002 level in 2007.

Table 8.2.5 shows the trend in GT*days at sea for the 2 derogations from 2003 onwards. The beam trawl fleet increased by about 5%. The static gear dropped 12% and 40% below the 2003 level in 2006 and 2007 respectively.

STECF-SGRST notes that the ratio of nominal effort (kW*days at sea) to GT*days at sea is about 3 for the beam trawl fleet and about 7 for the static gear.

Table 8.2.6 and Figure 8.2.3 show the trend in the number of vessels active in both derogations over the time series 2003-2007. Although it is assumed that the absolute numbers do not reflect the true picture of the regulated fisheries (see above), relative trends may give some indication of the evolution of these fisheries. The beam trawl fleet fluctuated around the same level since 2003. The static nets have decreased in 2007 to 19% below the 2003 level.

Figures 8.2.4 and 8.2.5 show the effort measures (kW*days, GT*days and NbVessels) plotted relative to their 2003 value for the two derogations 3a and 3b. For both derogations the trends in relative effort are very similar. The divergence in trends from the number of vessels could be explained partly by the lack of mesh size information for certain fisheries (see also above).

Table 8.2.1 – Western Channel - Trend in nominal effort (kW*days at sea) by existing derogations given in Table 1 of Annex IIC (Coun. Reg. 40/2008) and Member State, 2000-2007. Derogations are sorted by gear, special condition (SPECON), and country. Data qualities are summarised in section 5.5.2 and Table 5.5.2.1.

ANNEX	REG AREA (	REG GEAR	SPECON	COUNTRY	2000	2001	2002	2003	2004	2005	2006	2007
IIc	7e	3a	none	BEL	12964	31058	92967	135704	272963	299317	326630	436714
IIc	7e	3a	none	ENG	2575833	3030491	2907963	3374612	3206879	3227189	3283912	3026197
IIc	7e	3a	none	FRA		29328		19981	123685	140305	142268	191766
IIc	7e	3a	none	GBJ	90184	171795	151338	122867	209969	121552		
IIc	7e	3a	none	IRL				23419	35184	3267	5083	13610
IIc	7e	3a	none	NED					1470			
IIc	7e	3a	none	SCO								3666
IIc	7e	3b	none	ENG	261670	341896	251527	311964	201590	174766	150848	93281
IIc	7e	3b	none	FRA	68319	160625	495910	536959	655572	694684	584155	411312
IIc	7e	3b	none	SCO								3240
IIc	7e	3b	none	SPN						176	650	
IIc	7e	none	none	BEL		1565				111	1005	1933
IIc	7e	none	none	ENG	4773718	4259728	4107795	3894553	4249485	4365470	4253191	4321458
IIc	7e	none	none	FRA	13170118	15265720	21021793	17677024	20399128	24186777	21269562	20243551
IIc	7e	none	none	GBG	124978	149820	43963		75936	57178	45814	57732
IIc	7e	none	none	GBI	13000	21138	16978				19902	1116
IIc	7e	none	none	GBJ	186428	148493	106436	57886		8667	28248	42051
IIc	7e	none	none	GER	269612	197006	118202	94385	98335	92680	42091	
IIc	7e	none	none	IOM	13000	21138	16978				19902	
IIc	7e	none	none	IRL	505785	151307	155094	179642	341388	151660	3880	21768
IIc	7e	none	none	NED			1242548	1781536	1259464	1514797	1841683	1391150
IIc	7e	none	none	NIR					1302			
IIc	7e	none	none	SCO	864566	752426	775389	705191	607932	691449	585772	593926
IIc	7e	none	none	SPN			9543	109750	80639	71840	48387	54915

Table 8.2.2 – Western Channel - Trend in effort (GT*days at sea) by existing derogations given in Table 1 of Annex IIC (Coun. Reg. 40/2008) and Member State, 2003-2007. Derogations are sorted by gear, special condition (SPECON), and country. Data qualities are summarised in section 5.5.2 and Table 5.5.2.1.

ANNEX	REG AREA (	REG GEAR	SPECON	COUNTRY	2003	2004	2005	2006	2007
IIc	7e	3a	none	BEL	63250	130435	135727	147606	194781
IIc	7e	3a	none	ENG	970035	931814	932209	957036	923426
IIc	7e	3a	none	FRA	3200	21098	22767	19941	25479
IIc	7e	3a	none	GBJ	35244	63209	36080		
IIc	7e	3a	none	IRL	5022	7984	1055	1707	2904
IIc	7e	3a	none	NED		560			
IIc	7e	3a	none	SCO					1296
IIc	7e	3b	none	ENG	61144	47631	44936	42162	23145
IIc	7e	3b	none	FRA	60295	73199	80431	64739	48667
IIc	7e	3b	none	SCO					1024
IIc	7e	3b	none	SPN			146	320	
IIc	7e	none	none	BEL			307	769	940
IIc	7e	none	none	ENG	925101	1020408	1039082	1017913	972460
IIc	7e	none	none	FRA	3462508	3939991	4773740	4089621	3753685
IIc	7e	none	none	GBG		14231	10689	8384	12267
IIc	7e	none	none	GBI				4548	255
IIc	7e	none	none	GBJ	12154		1548	5046	7512
IIc	7e	none	none	GER	115397	132799	106385	59489	
IIc	7e	none	none	IOM				4548	
IIc	7e	none	none	IRL	62837	105670	41874	1240	9512
IIc	7e	none	none	NED	1418452	1017028	1146429	1480057	1054021
IIc	7e	none	none	NIR		301			
IIc	7e	none	none	SCO	229531	198595	218716	194240	207963
IIc	7e	none	none	SPN	52711	38488	52088	43021	47311

Table 8.2.3 – Western Channel - Trend in effort (maximum number of national vessels over national fisheries and quarters) by existing derogations given in Table 1 of Annex IIC (Coun. Reg. 40/2008) and Member State, 2000-2007. Derogations are sorted by gear, special condition (SPECON), and country. Data qualities are summarised in given in Section 5.5.2 and Table 5.5.2.1.

ANNEX	REG AREA (	REG GEAR	SPECON	COUNTRY	2003	2004	2005	2006	2007
IIc	7e	3a	none	BEL	28	28	33	29	32
IIc	7e	3a	none	ENG	34	33	32	29	31
IIc	7e	3a	none	FRA	2	6	6	5	7
IIc	7e	3a	none	GBJ	4	4	2		
IIc	7e	3a	none	IRL	2	2	2	4	1
IIc	7e	3a	none	NED		1			
IIc	7e	3a	none	SCO					1
IIc	7e	3b	none	ENG	29	23	18	17	12
IIc	7e	3b	none	FRA	28	29	28	32	33
IIc	7e	3b	none	SCO					1
IIc	7e	3b	none	SPN			1	2	
IIc	7e	none	none	BEL			1	2	2
IIc	7e	none	none	ENG	40	45	41	45	42
IIc	7e	none	none	FRA	122	121	134	158	172
IIc	7e	none	none	GBG		1	1	2	2
IIc	7e	none	none	GBI				1	1
IIc	7e	none	none	GBJ	1		1	1	1
IIc	7e	none	none	GER	3	4	3	3	
IIc	7e	none	none	IOM				1	
IIc	7e	none	none	IRL	7	10	6	1	1
IIc	7e	none	none	NED	12	13	13	10	10
IIc	7e	none	none	NIR		1			
IIc	7e	none	none	SCO	5	9	8	15	10
IIc	7e	none	none	SPN	67	41	31	22	36

Table 8.2.4 – Western Channel - Trend in nominal effort (kW*days at sea) by derogations given in Table 1 of Annex IIC (Coun. Reg. 40/2008), 2000-2007. Derogations are sorted by gear and special condition (SPECON). Data qualities are summarised in section 5.5.2 and Table 5.5.2.1.

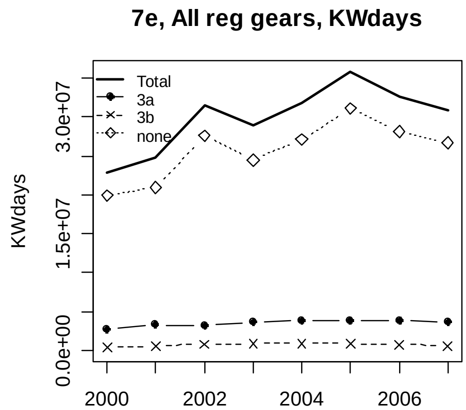
ANNEX	REG AREA	REG GEAR	SPECON	2000	2001	2002	2003	2004	2005	2006	2007	Rel. Change to 2002
IIc	7e	3a	none	2678981	3262672	3152268	3676583	3850150	3791630	3757893	3671953	0.16
IIc	7e	3b	none	329989	502521	747437	848923	857162	869626	735653	507833	-0.32
IIc	7e	none	none	19921205	20968341	27614719	24499967	27113609	31140629	28159437	26729600	-0.03
Sum				22930175	24733534	31514424	29025473	31820921	35801885	32652983	30909386	-0.02

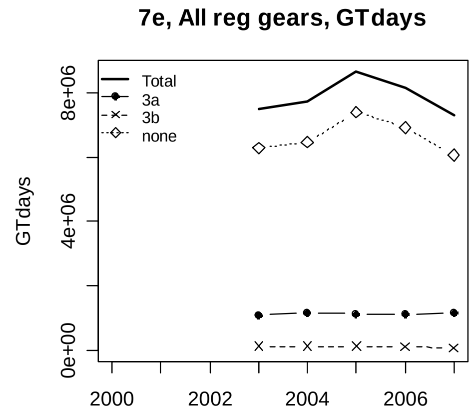
Table 8.2.5 – Western Channel - Trend in effort (GT*days at sea) by derogations given in Table 1 of Annex IIC (Coun. Reg. 40/2008) and Member State, 2003-2007. Derogations are sorted by gear and special condition (SPECON). Data qualities are summarised in section 5.5.2 and Table 5.5.2.1.

ANNEX	REG AREA	REG GEAR	SPECON	2003	2004	2005	2006	2007	Rel. Change to 2003
IIc	7e	3a	none	1076751	1155100	1127838	1126290	1147886	0.07
IIc	7e	3b	none	121439	120830	125513	107221	72836	-0.40
IIc	7e	none	none	6278691	6467511	7390858	6908876	6065926	-0.03
Sum				7476881	7743441	8644209	8142387	7286648	-0.03

Table 8.2.6 – Western Channel - Trend in effort (number of vessels, sum over maximum number of national vessels) in the Western Channel, 2003-2007.

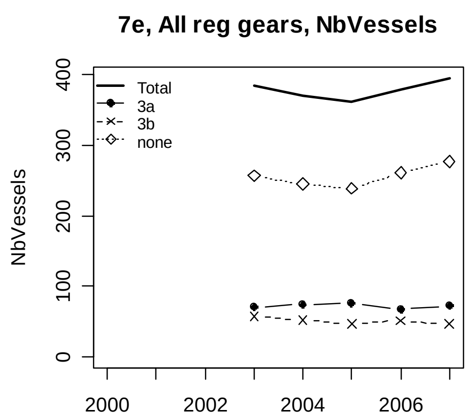
ANNEX	REG AREA	REG GEAR	SPECON	2003	2004	2005	2006	2007	Rel. Change to 2003
IIc	7e	3a	none	70	74	75	67	72	0.03
IIc	7e	3b	none	57	52	47	51	46	-0.19
IIc	7e	none	none	257	245	239	261	277	0.08





Figures 8.2.1 – Western Channel -Trend in nominal effort (kW*days at sea) by derogations given in Table 1 of Annex IIC (Coun. Reg. 40/2008), 2000-2007. Derogations are sorted by gear and special condition (SPECON). Data qualities are summarised in section 5.5.2 and Table 5.5.2.1. 3a represents beam trawls of mesh size ≥ 80 mm and 3b represents static nets with mesh size < 220 mm.

Figures 8.2.2 – Western Channel -Trend in nominal effort (GT*days at sea) by derogations given in Table 1 of Annex IIC (Coun. Reg. 40/2008), 2003-2007. Derogations are sorted by gear and special condition (SPECON). Data qualities are summarised in section 5.5.2 and Table 5.5.2.1. 3a represents beam trawls of mesh size ≥ 80 mm and 3b represents static nets with mesh size < 220 mm.



Figures 8.2.3 – Western Channel -Trend in nominal effort in number of vessels, (sum over maximum number of national vessels) by derogations given in Table 1 of Annex IIC (Coun. Reg. 40/2008), 2003-2007. Derogations are sorted by gear and special condition (SPECON). Data qualities are summarised in section 5.5.2 and Table 5.5.2.1. 3a represents beam trawls of mesh size ≥ 80 mm and 3b represents static nets with mesh size < 220 mm.

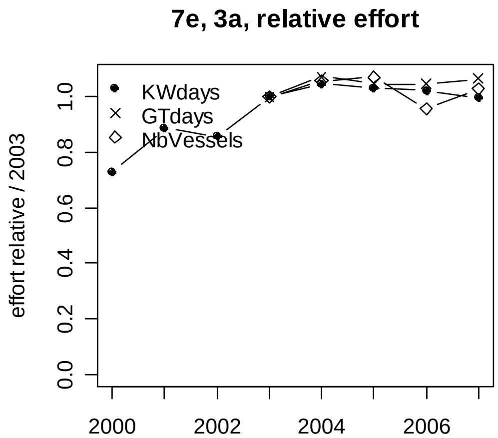


Figure 8.2.4. – Western Channel - effort measures plotted relative to their 2003 value, derogation 3a, gear Beam trawls of mesh size ≥ 80 mm

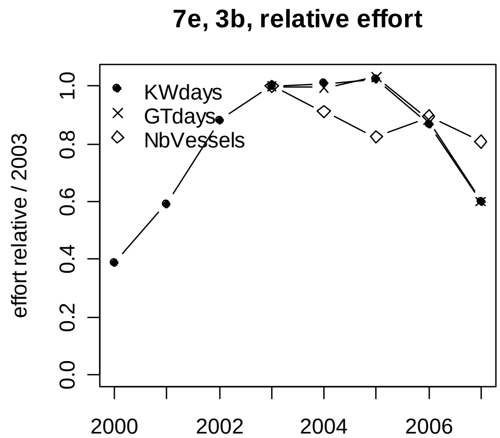


Figure 8.2.5. – Western Channel - effort measures plotted relative to their 2003 value, derogation 3b, gear Static nets with mesh size < 220 mm.

8.3. Trend in catch estimates 2003-2007 by derogation in management area 7e

Although the data available for the review of Annex IIC of regulation 40/2008 comes from all countries involved in the fisheries, there is little information on discards for most of the species. Only very sparse discard information is available for anglerfish, cod, haddock and whiting. The lack of discard information on plaice in particular, increases the likelihood of incorrect assumptions on total removals for that species.

The following Table 8.3.1 lists the landings and discards for the main species by derogations. For brevity, the following sections represent the landings and discards by derogation in weight and numbers for a subset of the species caught ie. anglerfish (ANF), cod (COD), haddock (HAD), hake, (HKE), *nephrops* (NEP), plaice (PLE), saithe (POK), sole (SOL), and whiting (WHG). However, additional data queries for other species can be made depending on data provisions of the national catches by the experts or national institutes. The data given in the table form the basis of Figure 8.3.1-3 displaying the relative catch compositions by derogations for the years 2003-2007. The lack of the dark bars representing discards also indicates lack of observations rather than low discard numbers.

Figure 8.3.1 shows that in the beam trawl fleets (3a) landings of anglerfish and sole have substantially increased in the last 3 years. Plaice landings have declined over the whole period where the landings of the other main species have been rather stable. Landings by static nets (derogations 3b) are dominated by anglerfish which show a sharp decline in the last 3 years. The category "none none" which is responsible for most of the landings (except for sole, plaice and partly anglerfish) consist mainly of otter trawls (see also section 8.6). Apart from a slight increase in cod landings and a slight decrease in hake landings, the main other species have fluctuated around the same levels in the last 5 years.

Tab. 8.3.1 – Western Channel -Landings (t), discards (t) and relative discard rates by species and derogation, 2003-2007 – Note: Discard information for area 7e are sparse and not available for all countries.

REG_AREA	SPECIES	YEAR	REG_GEAR	SPECON	LANDINGS	DISCARDS	DISC RATE BY GEAR
7e	ANF	2003	3a	none	500		
7e	ANF	2003	3b	none	472		
7e	ANF	2003	none	none	2617		
7e	ANF	2004	3a	none	795	1	
7e	ANF	2004	3b	none	711		
7e	ANF	2004	none	none	2869		
7e	ANF	2005	3a	none	795	55	0.06
7e	ANF	2005	3b	none	608		
7e	ANF	2005	none	none	3414		
7e	ANF	2006	3a	none	1014	66	0.06
7e	ANF	2006	3b	none	365		
7e	ANF	2006	none	none	2982		
7e	ANF	2007	3a	none	1089	108	0.09
7e	ANF	2007	3b	none	270		
7e	ANF	2007	none	none	3293		
7e	COD	2003	3a	none	34		
7e	COD	2003	3b	none	6		
7e	COD	2003	none	none	675		
7e	COD	2004	3a	none	29		
7e	COD	2004	3b	none	6		
7e	COD	2004	none	none	236		
7e	COD	2005	3a	none	33		
7e	COD	2005	3b	none	6		
7e	COD	2005	none	none	305		
7e	COD	2006	3a	none	36		
7e	COD	2006	3b	none	6		
7e	COD	2006	none	none	432		
7e	COD	2007	3a	none	50	70	0.58
7e	COD	2007	3b	none	5		
7e	COD	2007	none	none	511		
7e	HAD	2003	3a	none	17		
7e	HAD	2003	none	none	712		
7e	HAD	2004	3a	none	13		
7e	HAD	2004	none	none	385		
7e	HAD	2005	3a	none	11		0.01
7e	HAD	2005	none	none	367		
7e	HAD	2006	3a	none	17		0.01
7e	HAD	2006	none	none	494	5	0.01
7e	HAD	2007	3a	none	22	3	0.11
7e	HAD	2007	3b	none	1		
7e	HAD	2007	none	none	703	30	0.04
7e	HKE	2003	3a	none	5		
7e	HKE	2003	3b	none	10		
7e	HKE	2003	none	none	239		
7e	HKE	2004	3a	none	6	3	0.29
7e	HKE	2004	3b	none	4		
7e	HKE	2004	none	none	183		
7e	HKE	2005	3a	none	6		0.04
7e	HKE	2005	3b	none	5		
7e	HKE	2005	none	none	209		
7e	HKE	2006	3a	none	6		0.04
7e	HKE	2006	3b	none	8		
7e	HKE	2006	none	none	126		
7e	HKE	2007	3a	none	4		0.05
7e	HKE	2007	3b	none	3		
7e	HKE	2007	none	none	88		
7e	NEP	2003	none	none	4		
7e	NEP	2004	none	none	8		
7e	NEP	2005	none	none	13		

Tab. 8.3.1 - Continued – Western Channel -Landings (t), discards (t) and relative discard rates by species and derogation, 2003-2007 – Note: Discard information for area 7e are sparse and not available for all countries.

REG_AREA	SPECIES	YEAR	REG_GEAR	SPECON	LANDINGS	DISCARDS	DISC RATE BY GEAR
7e	NEP	2006	none	none	6		
7e	NEP	2007	none	none	10		
7e	PLE	2003	3a	none	819		
7e	PLE	2003	3b	none	4		
7e	PLE	2003	none	none	273		
7e	PLE	2004	3a	none	790	1	
7e	PLE	2004	3b	none	13		
7e	PLE	2004	none	none	257		
7e	PLE	2005	3a	none	767	2	
7e	PLE	2005	3b	none	22		
7e	PLE	2005	none	none	278		
7e	PLE	2006	3a	none	743	4	0.01
7e	PLE	2006	3b	none	10		
7e	PLE	2006	none	none	324		
7e	PLE	2007	3a	none	488		
7e	PLE	2007	3b	none	6		
7e	PLE	2007	none	none	255		
7e	POK	2003	3b	none	1		
7e	POK	2003	none	none	7		
7e	POK	2004	3a	none	1		
7e	POK	2004	3b	none	7		
7e	POK	2004	none	none	6		
7e	POK	2005	3b	none	15		
7e	POK	2005	none	none	3		
7e	POK	2006	3b	none	2		
7e	POK	2006	none	none	3		
7e	POK	2007	3b	none	1		
7e	POK	2007	none	none	1		
7e	SOL	2003	3a	none	197	1	
7e	SOL	2003	3b	none	12		
7e	SOL	2003	none	none	267		
7e	SOL	2004	3a	none	163		
7e	SOL	2004	3b	none	34		
7e	SOL	2004	none	none	227		
7e	SOL	2005	3a	none	487		
7e	SOL	2005	3b	none	65		
7e	SOL	2005	none	none	303		
7e	SOL	2006	3a	none	530		
7e	SOL	2006	3b	none	25		
7e	SOL	2006	none	none	283		
7e	SOL	2007	3a	none	462	1	
7e	SOL	2007	3b	none	34		
7e	SOL	2007	none	none	284		
7e	WHG	2003	3a	none	71	4	0.05
7e	WHG	2003	3b	none	4		
7e	WHG	2003	none	none	1779		
7e	WHG	2004	3a	none	59	1	0.02
7e	WHG	2004	3b	none	1		
7e	WHG	2004	none	none	1231		
7e	WHG	2005	3a	none	53		
7e	WHG	2005	3b	none	1		
7e	WHG	2005	none	none	1426		
7e	WHG	2006	3a	none	44	4	0.08
7e	WHG	2006	3b	none	4		
7e	WHG	2006	none	none	1264	29	0.02
7e	WHG	2007	3a	none	44	5	0.1
7e	WHG	2007	3b	none	5		
7e	WHG	2007	none	none	1298		

In accordance with the ToR, Table 8.3.2 lists the landings and discards at age by derogation of cod, plaice and sole. The values are illustrated in Figures 8.3.2 and 8.3.3. Additional species specific data queries could be provided on request depending on data provisions by the experts or national institutes.

Although provided in Table 8.3.2, the cod age distribution is not graphically illustrated as cod is of minor importance in area 7e. However, STECF-SGRST notes that for plaice especially, very limited discard information is available which is unfortunate and therefore not showing the true picture of total removals. The age distribution of plaice and sole landings for the two derogations (3a and none-none) are very similar.

Table 8.3.2 – Western Channel - Cod (COD), plaice (PLE) and sole (SOL) landings (L) and discards (D) at ages 1-9 (‘000) by derogation, 2003-2007. – Note: Discard information for area 7e are sparse and not available for all countries.

SPECIES	REG_AREA	REG_	SPECON	AGE	2003 L	2003 D	2004 L	2004 D	2005 L	2005 D	2006 L	2006 D	2007 L	2007 D
COD	7e	3a	none	1									12	71
COD	7e	3a	none	2							6			
COD	7e	3a	none	3										
COD	7e	3a	none	4										
COD	7e	3a	none	5										
COD	7e	3a	none	6										
COD	7e	3a	none	7										
COD	7e	3a	none	8										
COD	7e	3a	none	9										
COD	7e	none	none	1			8				304		801	
COD	7e	none	none	2	84		27				48		55	
COD	7e	none	none	3	12		4				33		4	
COD	7e	none	none	4	8						2		1	
COD	7e	none	none	5			1				6			
COD	7e	none	none	6							1			
COD	7e	none	none	7							1			
COD	7e	none	none	8										
COD	7e	none	none	9										
PLE	7e	3a	none	1			19		17	1	13		1	
PLE	7e	3a	none	2	359		369	1	494	9	475	16	130	
PLE	7e	3a	none	3	592		833		485	1	685		420	
PLE	7e	3a	none	4	420		446		389	2	285		307	
PLE	7e	3a	none	5	197		228		158	1	291		150	
PLE	7e	3a	none	6	199		110		85		102		106	
PLE	7e	3a	none	7	210		66		31		60		41	
PLE	7e	3a	none	8	49		89		32		24		19	
PLE	7e	3a	none	9	38		19		30		15		7	
PLE	7e	none	none	1			3		1		6		1	
PLE	7e	none	none	2	132		232		276		321	1	148	
PLE	7e	none	none	3	187		383		322	1	493		434	
PLE	7e	none	none	4	108		174		247		171		225	
PLE	7e	none	none	5	38		46		76		109		61	
PLE	7e	none	none	6	31		23		29		34		37	
PLE	7e	none	none	7	25		8		8		16		13	
PLE	7e	none	none	8	4		6		8		5		4	
PLE	7e	none	none	9	2		2		7		2		3	
SOL	7e	3a	none	1			5		1					
SOL	7e	3a	none	2	32	3	74	1	107		165		103	
SOL	7e	3a	none	3	195	4	251	1	207		349		502	1
SOL	7e	3a	none	4	280	4	94		314		192		338	
SOL	7e	3a	none	5	166		64		153		281		143	
SOL	7e	3a	none	6	45		85		185		118		159	
SOL	7e	3a	none	7	39		14		161		162		86	
SOL	7e	3a	none	8	23		21		31		170		90	
SOL	7e	3a	none	9	14		10		41		65		82	
SOL	7e	none	none	1										
SOL	7e	none	none	2			4		2		34		44	
SOL	7e	none	none	3			18		14		71		196	
SOL	7e	none	none	4			10		28		49		122	
SOL	7e	none	none	5			9		25		84		44	
SOL	7e	none	none	6			12		36		34		28	
SOL	7e	none	none	7			2		26		44		16	
SOL	7e	none	none	8			3		5		37		12	
SOL	7e	none	none	9			1		8		12		11	

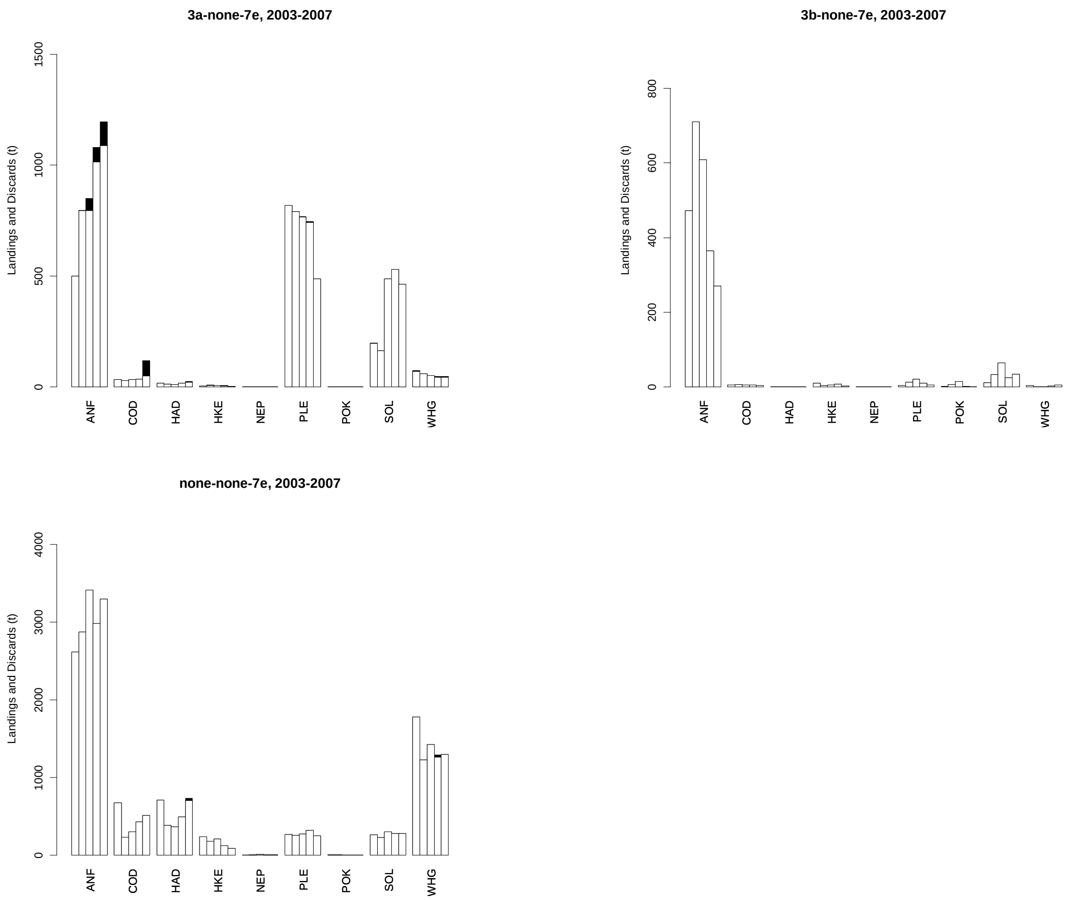


Fig. 8.3.1 – Western Channel - Landings (t) and discard (t) by derogation and species, 2003-2007 (from left to right). Note that information collected on discards is incomplete, so the apparent absence of discards in the figures for a given species/gear does not necessarily means zero discards.

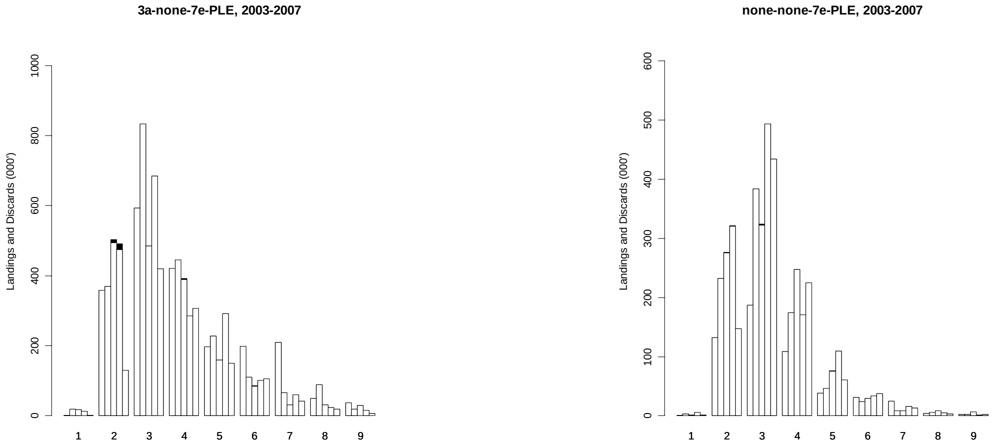


Fig. 8.3.2 – Western Channel - Plaice landings and discards (‘000) at ages 1-9 by major derogations, 2003-2007 (from left to right). Note that information collected on discards is incomplete, so the apparent absence of discards in the figures does not necessarily means zero discards.

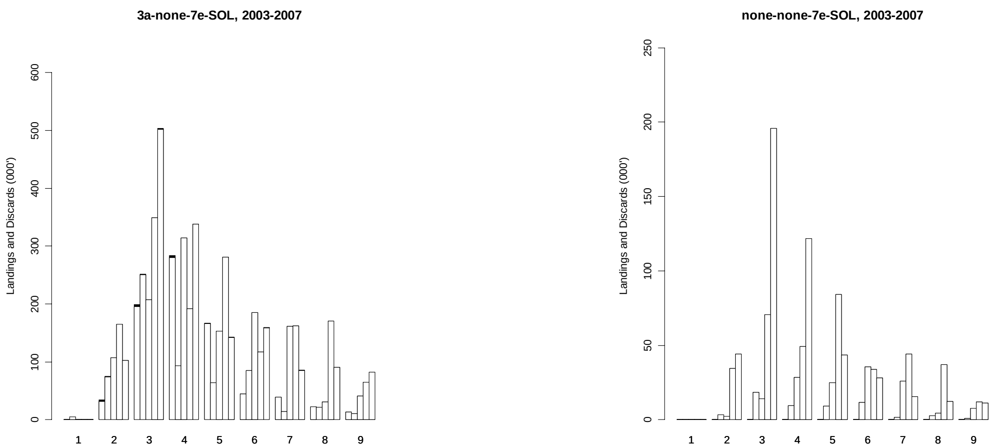


Fig. 8.3.3 – Western Channel - Sole landings and discards (‘000) at ages 1-9 by major derogations, 2003-2007 (from left to right). Note that information collected on discards is incomplete, so the apparent absence of discards in the figures does not necessarily means zero discards.

8.4. Trend in CPUE of sole and plaice

Very limited discards are available for sole and plaice, therefore LPUE for sole and plaice are represented in Tables 8.4.1 and 8.4.2 and Figures 8.4.1 and 8.4.2 respectively. For both species the beam trawl fleet has the higher LPUE's. Sole LPUE's by beam trawlers have increased sharply since 2005 whereas sole LPUE's for static nets have fluctuated between 34 and 75 g/kW*days in the last 4 years. The plaice LPUE's have been fluctuated around 200 g/kW*days for the beam trawl fleets until 2006 and dropped to 133 g/kW*days in 2007. The values for static nets varied between 5 and 25 g/kW*days.

Table 8.4.1 – Western Channel - Sole CPUE (g/(kW*days)) by derogation and year, 2003-2007. Note: Discard information for area 7e are sparse and therefore the table figures should be treated as LPUE.

SPECIES	ANNEX	REG AREA	REG GEAR	SPECON	CPUE 2003	CPUE 2004	CPUE 2005	CPUE 2006	CPUE 2007
SOL	IIc	7e	3a	none	54	42	129	141	126
SOL	IIc	7e	3b	none	14	39	75	34	67
SOL	IIc	7e	none	none	9	7	9	10	10

Table 8.4.2 – Western Channel - Plaice CPUE (g/(kW*days)) by derogation and year, 2003-2007. Note: Discard information for area 7e are sparse and therefore the table figures should be treated as LPUE.

SPECIES	ANNEX	REG AREA	REG GEAR	SPECON	CPUE 2003	CPUE 2004	CPUE 2005	CPUE 2006	CPUE 2007
PLE	IIc	7e	3a	none	223	205	203	199	133
PLE	IIc	7e	3b	none	5	15	25	14	11
PLE	IIc	7e	none	none	11	10	9	12	10

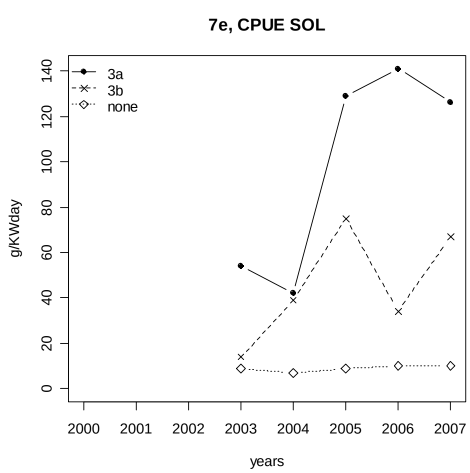


Figure 8.4.1- Western Chanel - Sole – CPUE (g/(KW*days)) by derogation and year, 2003-2007. Note: Discard information for area 7e are sparse and therefore the figure should rather be interpreted as LPUE.

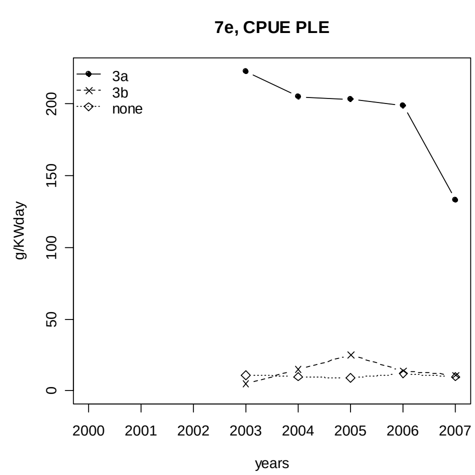


Figure 8.4.2- Western Chanel Plaice – CPUE (g/(KW*days)) by derogation and

year, 2003-2007. Note: Discard information for area 7e are sparse and therefore the figure should rather be interpreted as LPUE.

8.5. Ranked derogations according to relative contributions to sole catches

The relative contribution of sole weights in the catch (Table 8.5.1) shows an increase from 2004 to 2005 for the dominating beam trawls (3a), which coincides with a decrease of the category “none none”, mainly otter trawls which are not effort regulated in Annex IIc. STECF-SGRST notes however that this otter trawl fleet is responsible for about 30% of the estimated sole and plaice catches in weight and about 90% of the cod catches in weight (see also section 8.6). The static nets with mesh size <220 mm (3b) are taking around 3-8% of sole catches in weight. There is no difference in ranking the derogations according the year 2007 or the average of 2005-2007.

Table 8:5.1 - Western Channel - Ranked derogations according to relative sole catches in weight (t) 2003-2007. Ranking is according to the year 2007 and the average 2005-2007.

SPECIES	REG_AREA	REG_GEAR	SPECON	2003	2004	2005	2006	2007	Avg. 2005-2007
SOL	7e	3a	none	0,42	0,38	0,57	0,63	0,59	0,60
SOL	7e	none	none	0,56	0,54	0,35	0,34	0,36	0,35
SOL	7e	3b	none	0,03	0,08	0,08	0,03	0,04	0,05

The estimation of relative contributions of the individual derogations is based only on the derogations for which age information is available. Derogations without any information about age compositions are disregarded. Therefore Table 8.5.2 which ranked derogations relative to sole catches in numbers should be interpreted with caution and is probably not reflecting reality as no information on numbers at age is available for regulation 3b.

Table 8.5.2 - Western Channel - Ranked derogations according to relative sole catches in numbers (‘000) 2003-2007. Ranking is according to the year 2007 and average 2005-2007.

SPECIES	REG_AREA	REG_GEAR	SPECON	2003	2004	2005	2006	2007	Avg. 2005-2007
SOL	7e	3a	none	1	0.92	0.89	0.8	0.76	0.82
SOL	7e	none	none		0.08	0.11	0.2	0.24	0.18

8.6. Unregulated gear in management area 7e

Category 'none none' represents unregulated gear types and mesh sizes in addition to unidentified mesh sizes. This section provides a break down of the main gears within this category in terms of effort (kW*Days at sea) and cod, sole and plaice catches.

The effort of the unregulated gear group 'None none' has been around 85% of the overall nominal effort for the whole time series.

Table 8.6.1 shows the disaggregation of the 'none none' category into the different gears and mesh sizes. Effort by otter trawl with mesh size 80-89 mm is by far the dominant gear category with percentages in excess of 47% for all years. Dredge gears, otter trawl (mesh size 100-119), pots, pelagic trawl (mesh 32-54) and longline, each contribute about 5% of the overall effort of the non regulated gear. The rest of the gears account for less then 3% .

Table 8.6.2 provides the cod catches of the unregulated gear types. The cod catches of the unregulated gear are in excess of 87% of the overall cod catches in area 7e for each year of the data series (2003-2007). The otter trawl fleet is taking the bulk of these catches with percentages in excess of 82%. For 2007 the unregulated gears account for 90% of the overall cod catches where the otter trawl fleet is responsible for 89% of these catches.

Table 8.6.3 provides the sole catches of the unregulated gear types. The sole catches of the unregulated gear are in excess of 34% of the overall sole catches in area 7e for each year of the data series (2003-2007). The otter trawl fleet is the main fleet involved with percentages in excess of 24%. For 2007 the unregulated gears account for 36% of the overall sole catches where the otter trawl fleet is responsible for 29% of these catches.

Table 8.6.4 provides the plaice catches of the unregulated gear types. The plaice catches of the unregulated gear are in excess of 24% of the overall plaice catches in area 7e for each year of the data series (2003-2007). The otter trawl fleet is the main fleet involved with percentages in excess of 21%. For 2007 the unregulated gears account for 34% of the overall plaice catches where the otter trawl fleet is responsible for 32% of these catches.

Again STECF-SGRST would like to mention that there is little information on discards for area 7e and therefore that the above percentages are more likely to be representative for landings than for total catches.

Table. 8.6.1. Western Channel Unregulated gear (category none-none) effort (kW*Days) by gear type, 2000-2007.

ANNEX	REG AREA	REG GEAR	Gear code	Mesh size	2000	2001	2002	2003	2004	2005	2006	2007
IIc	7e	none	OTTER	80-89	9441808	11069679	15569010	12017672	14100464	17834431	14515817	13231613
IIc	7e	none	DREDGE	none	2536655	1946028	2015203	1858377	2330307	2670164	2694497	2532544
IIc	7e	none	OTTER	100-119	2203065	2308467	2876770	2811914	1905619	1978236	2104648	2289244
IIc	7e	none	POTS	none	1244109	1303093	1307216	1165915	1643856	1590859	1857446	1654712
IIc	7e	none	PEL_TRAWL	32-54	960081	1110551	1947549	2069283	1786146	1588140	2036584	1520792
IIc	7e	none	DREDGE	90-99	47138	95399	149608	172153	188511	349145	776378	1201884
IIc	7e	none	LONGLINE	none	277472	274896	287358	579208	827942	949060	943660	942068
IIc	7e	none	OTTER	90-99	739102	943318	1120902	994123	1146454	1079610	521697	529588
IIc	7e	none	GILL	>=220	242452	272450	298177	220240	412160	356950	378453	477511
IIc	7e	none	TRAMMEL	>=220	82477	118360	46446	83429	158388	247186	357349	447242
IIc	7e	none	PEL_TRAWL	100-119	78075	146379	171689	283673	299333	359557	445318	408531
IIc	7e	none	PEL_TRAWL	80-89	330308	241445	166972	184954	173910	84898	166934	232472
IIc	7e	none	DREDGE	16-31	805	5637	79264	83460	104436	165490	144282	168783
IIc	7e	none	DEM_SEINE	80-89			21540	20329	38171	76858	151977	142416
IIc	7e	none	OTTER	none	606186	290061	599349	597798	661464	431599	126780	117136
IIc	7e	none	PEL_TRAWL	55-69			7690	70590			14420	114812
IIc	7e	none	OTTER	32-54	65890	154939	207462	258364	321095	408108	197615	108192
IIc	7e	none	GILL	none	30613	61487	61805	84003	124067	126439	95016	86472
IIc	7e	none	PEL_TRAWL	16-31	48881	44794	39312	42117	36626	39373	41880	76995
IIc	7e	none	PEL_SEINE	<16	25409	32077	43671	122963	89001	76715	131262	74075
IIc	7e	none	DREDGE	<16	147	2703	27498	132647	38380	83239	101186	69298
IIc	7e	none	OTTER	70-79	2916	220	1127	49562	41556	89463	52010	58240
IIc	7e	none	DREDGE	32-54		2080	10512	5023	2676	36118	38806	42080
IIc	7e	none	TRAMMEL	none	19918	25624	58158	57701	61353	113621	48609	40100
IIc	7e	none	PEL_SEINE	16-31	11058	15336	7192	2212	3595	10264	8474	25553
IIc	7e	none	DREDGE	80-89	206280	190542	152092	135777	137717	29376	29057	24733
IIc	7e	none	OTTER	55-69	1266	23744	64878	154614	211348	129246	37522	14125
IIc	7e	none	OTTER	<16	27070	1069	43956	20504	3476	3131	4718	11939
IIc	7e	none	PEL_TRAWL	70-79	7165	8472				5832	720	7648
IIc	7e	none	OTTER	16-31	34934	51348	2735	10963	5546	9851	14245	7186
IIc	7e	none	DREDGE	100-119	8621	5481	5294	29149	11213	735	7537	7149
IIc	7e	none	BEAM	none	73021	41611	32222	23635	77040	59853		6120
IIc	7e	none	PEL_SEINE	none	1720		913		1323	7452	2176	5204
IIc	7e	none	PEL_TRAWL	none	434513	102473	119384	38821	48086	1294	320	4234
IIc	7e	none	OTTER	>=120	36160	16544	23894	20578	19645	10703	13320	3338
IIc	7e	none	DREDGE	>=120			1140	306	2277	587	1218	2569
IIc	7e	none	PEL_TRAWL	90-99	71994	47823	2310	21029	25793	17712	11025	1784
IIc	7e	none	DREDGE	70-79	840	1112	775	3062		1704	8809	1104
IIc	7e	none	DREDGE	55-69	784	683	891	280	151	5348	500	910
IIc	7e	none	POTS	90-99			1024	323				162
IIc	7e	none	PEL_SEINE	>=120				236				
IIc	7e	none	PEL_SEINE	100-119			318	1749				
IIc	7e	none	PEL_TRAWL	<16	647	1180	1550					
IIc	7e	none	PEL_TRAWL	>=120	6474	1079						
IIc	7e	none	POTS	>=220	285	4074			3978	330		
IIc	7e	none	POTS	100-109			89					
IIc	7e	none	POTS	10-30					115			
IIc	7e	none	POTS	110-149					220		305	
IIc	7e	none	POTS	50-59				810				
IIc	7e	none	POTS	80-89					48		95	
IIc	7e	none	none	none	14866	6083	39774	70421	70123	111952	76772	39042
Sum					19921205	20968341	27614719	24499967	27113609	31140629	28159437	26729600

Table. 8.6.2. Western Chanel. Unregulated gear (category none-none) cod (t) catch composition by gear type, 2003-2007. Note: Discard information for area 7e are sparse and therefore the table figures should rather be interpreted as landings then catches.

ANNEX	REG ARE	SPECIES	REG GEA	Gear code	Mesh size	2003	2004	2005	2006	2007
IIc	7e	COD	none	OTTER	80-89	440.18	159.60	234.60	304.90	384.79
IIc	7e	COD	none	OTTER	100-119	174.74	49.66	54.07	80.98	104.89
IIc	7e	COD	none	OTTER	90-99	42.65	12.36	9.92	4.60	12.26
IIc	7e	COD	none	GILL	>=220	2.61	3.87	3.02	4.12	3.04
IIc	7e	COD	none	TRAMMEL	>=220	2.21	0.67	0.99	2.05	1.74
IIc	7e	COD	none	LONGLINE	none	6.69	6.84	0.87	33.20	1.31
IIc	7e	COD	none	DEM_SEINE	80-89				0.64	1.25
IIc	7e	COD	none	DREDGE	none	0.30	0.07	0.08	0.11	1.00
IIc	7e	COD	none	OTTER	32-54	0.32	0.11		0.02	0.50
IIc	7e	COD	none	OTTER	<16	0.01	0.25	0.02	0.00	0.17
IIc	7e	COD	none	POTS	none	0.32	0.02	0.01	0.09	0.11
IIc	7e	COD	none	DREDGE	16-31					0.09
IIc	7e	COD	none	GILL	none	0.69	0.23	0.21	0.37	0.06
IIc	7e	COD	none	TRAMMEL	none	0.55	0.05	0.14	0.13	0.05
IIc	7e	COD	none	DREDGE	90-99	0.01	0.01	0.01	0.02	0.05
IIc	7e	COD	none	OTTER	none	2.68	0.63	0.32	0.78	0.03
IIc	7e	COD	none	OTTER	70-79	0.00	0.02	0.02	0.20	0.02
IIc	7e	COD	none	OTTER	55-69	0.03	0.02	0.00	0.01	0.01
IIc	7e	COD	none	BEAM	none	0.00	0.93	0.00		0.01
IIc	7e	COD	none	DREDGE	70-79					0.01
IIc	7e	COD	none	DREDGE	80-89	0.02	0.01		0.01	0.01
IIc	7e	COD	none	PEL_TRAWL	80-89	0.80	0.00		0.01	0.01
IIc	7e	COD	none	DREDGE	100-119	0.01				
IIc	7e	COD	none	OTTER	>=120		0.32			
IIc	7e	COD	none	OTTER	16-31	0.01		0.13	0.00	
IIc	7e	COD	none	PEL_TRAWL	100-119			0.01	0.01	
IIc	7e	COD	none	PEL_TRAWL	90-99	0.03		0.10		
IIc	7e	COD	none	none	none	0.01				
Sum						675	236	305	432	511

Table. 8.6.3. Western Chanel. Unregulated gear (category none-none) sole (t) catch composition by gear type, 2003-2007. Note: Discard information for area 7e are sparse and therefore the table figures should rather be interpreted as landings then catches.

ANNEX	REG AREA	SPECIES	REG GEAR	Gear code	Mesh size	2003	2004	2005	2006	2007
IIc	7e	SOL	none	OTTER	80-89	124.03	85.07	161.73	176.24	188.09
IIc	7e	SOL	none	DREDGE	none	11.71	12.83	25.25	22.60	23.57
IIc	7e	SOL	none	OTTER	90-99	18.08	15.73	14.91	18.50	16.46
IIc	7e	SOL	none	OTTER	32-54	9.33	4.67	8.98	10.95	10.48
IIc	7e	SOL	none	OTTER	100-119	15.08	16.13	14.43	10.98	9.96
IIc	7e	SOL	none	TRAMMEL	none	13.11	8.85	12.94	13.64	9.32
IIc	7e	SOL	none	OTTER	none	46.32	33.94	26.29	12.15	8.72
IIc	7e	SOL	none	DREDGE	90-99	2.96	2.19	2.12	2.14	5.40
IIc	7e	SOL	none	OTTER	70-79	1.21	1.21	2.49	2.59	3.08
IIc	7e	SOL	none	GILL	none	3.48	5.40	7.58	1.79	1.67
IIc	7e	SOL	none	OTTER	55-69	5.72	6.63	4.89	3.35	1.47
IIc	7e	SOL	none	POTS	none	0.26	0.43	2.70	0.24	1.25
IIc	7e	SOL	none	DREDGE	80-89	1.51	0.63	0.50	0.78	1.05
IIc	7e	SOL	none	DREDGE	16-31	1.25	0.88	1.17	0.39	0.83
IIc	7e	SOL	none	BEAM	none	3.35	21.81	11.27		0.82
IIc	7e	SOL	none	GILL	>=220	4.33	2.13	0.25	0.13	0.45
IIc	7e	SOL	none	TRAMMEL	>=220	1.07	5.01	0.02	0.32	0.43
IIc	7e	SOL	none	OTTER	>=120	0.52	0.70	1.04	1.52	0.19
IIc	7e	SOL	none	DREDGE	32-54				0.14	0.06
IIc	7e	SOL	none	OTTER	16-31	0.25	0.17	0.08	0.23	0.06
IIc	7e	SOL	none	LONGLINE	none	0.02	0.02	0.04	0.28	0.05
IIc	7e	SOL	none	OTTER	<16	0.02	0.00	0.05	0.01	0.04
IIc	7e	SOL	none	PEL_TRAWL	32-54					0.04
IIc	7e	SOL	none	DREDGE	<16	0.01		0.01	0.04	0.01
IIc	7e	SOL	none	DREDGE	100-119	1.13	0.16		0.05	0.01
IIc	7e	SOL	none	PEL_TRAWL	80-89	0.10	0.37	0.02	0.02	0.00
IIc	7e	SOL	none	DEM_SEINE	80-89				0.00	
IIc	7e	SOL	none	DREDGE	>=120	0.09	0.06			
IIc	7e	SOL	none	DREDGE	55-69		0.01	0.01		
IIc	7e	SOL	none	DREDGE	70-79	0.13				
IIc	7e	SOL	none	PEL_TRAWL	70-79			0.22		
IIc	7e	SOL	none	PEL_TRAWL	90-99	0.01				
IIc	7e	SOL	none	none	none	1.83	2.23	3.98	3.79	
Sum						267	227	303	283	284

Table. 8.6.4. Western Chanel. Unregulated gear (category none-none) plaice (t) catch composition by gear type, 2003-2007. Note: Discard information for area 7e are sparse and therefore the table figures should rather be interpreted as landings then catches.

ANNEX	REG AREA	SPECIES	REG GEAR	Gear code	Mesh size	2003	2004	2005	2006	2007
IIc	7e	PLE	none	OTTER	80-89	173.69	172.49	201.16	240.65	207.58
IIc	7e	PLE	none	OTTER	90-99	38.42	28.93	29.91	39.48	21.98
IIc	7e	PLE	none	OTTER	100-119	19.68	16.68	11.94	16.14	9.78
IIc	7e	PLE	none	DREDGE	none	4.68	7.22	12.03	7.61	3.82
IIc	7e	PLE	none	DREDGE	90-99	1.29	1.19	1.61	1.20	2.60
IIc	7e	PLE	none	OTTER	none	18.68	8.11	8.65	6.47	2.34
IIc	7e	PLE	none	TRAMMEL	none	6.05	1.07	2.48	2.35	1.69
IIc	7e	PLE	none	OTTER	32-54	2.22	1.67	2.63	2.29	1.40
IIc	7e	PLE	none	OTTER	55-69	2.22	2.59	2.05	1.01	0.84
IIc	7e	PLE	none	OTTER	70-79	0.11	0.18	0.39	0.54	0.82
IIc	7e	PLE	none	DREDGE	80-89	0.56	0.46	0.16	0.45	0.64
IIc	7e	PLE	none	TRAMMEL	>=220	1.18	0.03	0.07	0.22	0.47
IIc	7e	PLE	none	GILL	>=220	0.20	0.39	0.39	0.27	0.27
IIc	7e	PLE	none	OTTER	<16	0.09	0.08	0.11	0.08	0.18
IIc	7e	PLE	none	POTS	none	0.04	0.00	0.01	0.08	0.16
IIc	7e	PLE	none	LONGLINE	none	0.15	0.08	0.03	0.12	0.15
IIc	7e	PLE	none	DREDGE	16-31	0.17	0.13	0.19	0.02	0.13
IIc	7e	PLE	none	DEM_SEINE	80-89			0.01	0.14	0.13
IIc	7e	PLE	none	OTTER	>=120	0.15	0.38	0.28	4.23	0.09
IIc	7e	PLE	none	GILL	none	0.83	3.41	0.74	0.43	0.08
IIc	7e	PLE	none	DREDGE	100-119	0.50	0.03		0.22	0.06
IIc	7e	PLE	none	PEL_TRAWL	32-54					0.05
IIc	7e	PLE	none	BEAM	none	1.40	11.00	2.07		0.04
IIc	7e	PLE	none	PEL_SEINE	<16	0.01				0.02
IIc	7e	PLE	none	DREDGE	32-54				0.03	0.01
IIc	7e	PLE	none	PEL_TRAWL	none					0.01
IIc	7e	PLE	none	DREDGE	<16	0.01		0.01	0.01	0.01
IIc	7e	PLE	none	PEL_TRAWL	80-89	0.00	0.01	0.07	0.01	0.00
IIc	7e	PLE	none	DREDGE	>=120		0.02			0.00
IIc	7e	PLE	none	OTTER	16-31	0.07	0.03	0.24	0.09	0.00
IIc	7e	PLE	none	PEL_TRAWL	90-99	0.01		0.00		0.00
IIc	7e	PLE	none	DREDGE	55-69		0.01			
IIc	7e	PLE	none	DREDGE	70-79	0.03				
IIc	7e	PLE	none	PEL_TRAWL	100-119			0.00	0.04	
IIc	7e	PLE	none	PEL_TRAWL	16-31	0.00				
IIc	7e	PLE	none	none	none	0.30	0.61	0.38		
Sum						273	257	278	324	255

8.7. Fishing effort and catches (landings and discards) of sole and associated species of vessels <10m

8.7.1. General considerations regarding catches of vessels <10m

Table 8.7.1 shows a preliminary overview of the catches of some main species (cod, plaice, sole, hake and nephrops in area 7e by the vessels <10m in 2007. It should be noted that not all countries have submitted information and that the total figures are therefore likely to give an underestimation of the catches of this vessel category. STECF-SGRST would like to mention that although these figures are underestimates, they indicate that at least 10%, 14%, 11% and 1% of the total cod, plaice, sole and hake catches respectively are taken by vessels <10m.

Table 8.7.1 – Western Channel – Overview of cod, plaice, sole, hake and nephrops catches by vessels <10m in 2007.

	Sweden	Denmark	Germany	Belgium	France	Scotland	E&W	Ireland	Spain	Portugal	Netherlands	Total <10m	Total catch	% <10m
cod					2,8	0	53	0				55,8	566	10
plaice					24,5	0	80	0				104,5	749	14
sole					41,8	0	44	0				85,8	780	11
hake					0,05	0	1,35	0				1,4	95	1
nephrops					0		0	0				0	10	0

8.7.2. Country specific information of vessels <10m

More detailed information for vessels <10 meters were available only from France.

France

Landings: all vessels registered in the national Fleet Register have to submit a declaration: a monthly form for vessels less than 10 m. Table 8.7.2 gives the number of vessels less than 10 meters for each gear for 2003 to 2007 period. The number of vessels for all fleets have been fluctuating from 2003 to 2006 at the same level For 2007, there has been a decline for almost all of the gear categories..

Table 8.7.3 shows landings by gear for the area 7e over the same period. Most of these fleets catch cod and sole but in rather low proportion compare to there total catch. Nevertheless, for trammels sole fluctuates between 11 and 14 % in the landings over the 2003 to 2007 period.

Discards: The sampling programme carried out in sub-division 7e does not allow the calculation of discards rates, although in other regions those discards rates are not indicated to be important in the case of sole.

Effort data are calculated from declarative sources listed above. They are validated by cross-checking with a national sampling for monthly activity calendar (all fishing vessels are sampled directly or indirectly to assess the metiers they have practiced the previous year; the reference effort period in the fishing calendar is the month).

Sampling plans for sole: Length structure is derived from a sampling plan based on sampling of commercial categories. The assumption is that, whatever the metier, the length structure of a given commercial category is similar. The sampling for overall landings as well as for age is stratified by quarter is stratified by quarter. The main harbours sampled are Granville and Cherbourg. The overall number of fish sampled per year is about 600-700 individuals and all individual fishes are sexed, weighed and aged. Maturity stage is recorded during the second quarter.

Table 8.7.2. - Western Channel - Number of French vessels <10m by gear, 2003-2007

Gear	2003	2004	2005	2006	2007
Dredge	453	419	403	429	319
Gill	371	350	451	495	374
Longline	152	172	160	203	161
Unknown	43	31	40	30	35
Otter	123	112	95	98	71
Pel.seine		1		3	1
PelTrawl	1		2		1
Pots	478	518	525	581	523
Small beam		3			
Trammel	256	231	256	267	259
Total	1877	1837	1932	2106	1744

Table 8.7.3. - Western Channel - Landings (Kilos) of French vessels <10m by gear type and species, 2003-2007

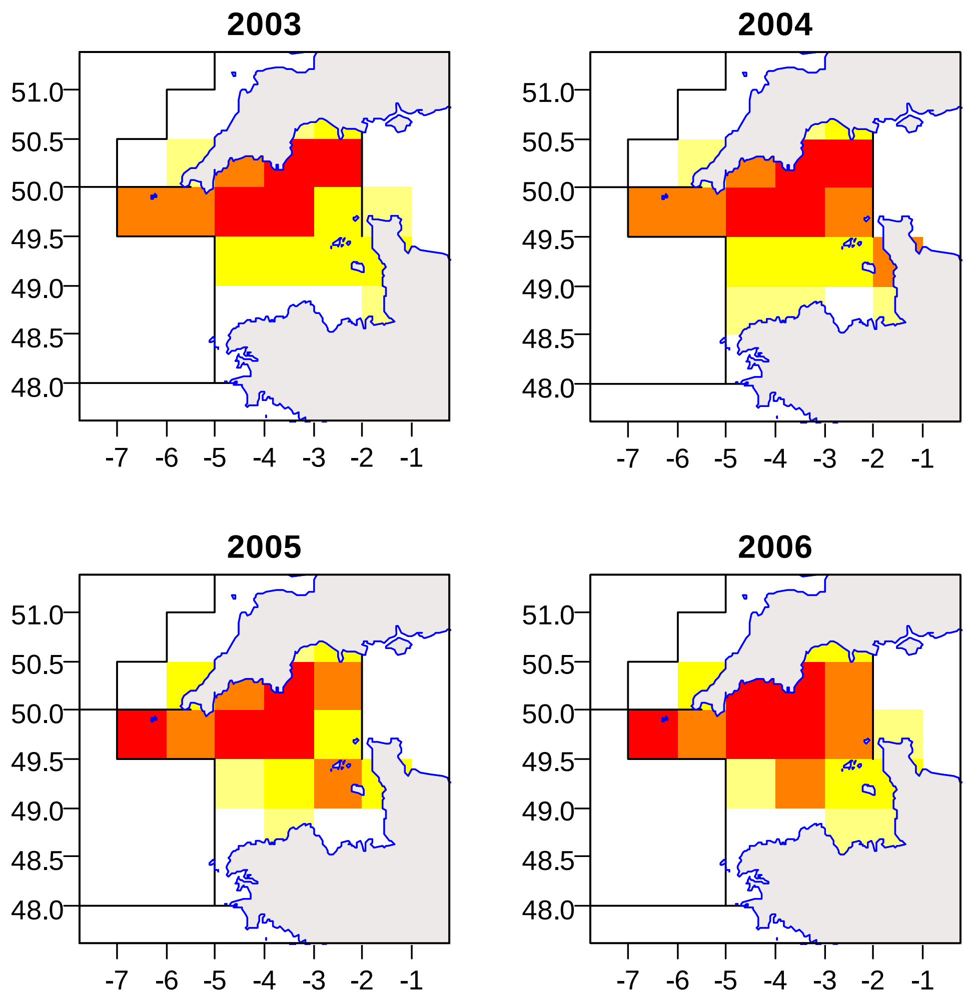
	Gear	Sole	Seabass	Cod	Dab	Plaice	Anglerfish	Whiting	Other	Total
2003	Dredge	685	694	15	4	157	45	35	3 278 352	3 279 987
	Gill	10 377	11 766	1 021		4 400	34 785	8 750	326 964	398 063
	Longline	229	66 290	128		51	30	565	133 080	200 373
	Unknown	30	19			22	53	80	7 201	7 405
	Otter	16 933	2 675	345	715	11 836	1 347	436	236 231	270 518
	Pel.Trawl								60	60
	Pots	660	840	9		270	1 380		6 032 474	6 035 633
	Trammel	22 511	5 760	2 341	150	7 005	69 856	3 150	153 998	264 771
2004	Dredge	355	629			52	80	290	4 491 696	4 493 102
	Gill	8 802	18 314	1 682	40	5 051	76 831	5 720	375 159	491 599
	Longline	70	101 400	60		240	55	1 570	182 328	285 723
	Unknown		50						3 530	3 580
	Otter	10 471	2 061	285	276	5 460	12 562	819	414 160	446 094
	Pots	3 410	870			1	2 400		7 478 317	7 484 998
	Small beam	2 960		110		2 040			1 605	6 715
	Trammel	17 964	4 949	91	20	8 348	75 725	1 570	134 886	243 553
2005	Dredge	63	230			11	1 035	260	3 317 603	3 319 202
	Gill	10 059	17 515	346	23	4 017	61 178	4 616	236 347	334 101
	Longline	51	100 680	33		75	30	1 190	124 395	226 454
	Unknown								880	880
	Otter	12 740	1 003	358	4 170	14 614	1 332	824	167 665	202 706
	Pel.Trawl		1 130					2	3 816	4 948
	Pots	216	167			21	18		5 806 303	5 806 725
	Trammel	25 356	7 108	876	429	10 171	64 250	1 761	116 852	226 803
2006	Dredge	64	54			60	77	20	4 055 261	4 055 536
	Gill	6 158	14 115	753	9	3 883	80 219	6 354	347 728	459 219
	Longline	333	147 320	42		58	14	2 396	160 889	311 052
	Unknown								9 430	9 430
	Otter	8 139	475	65	830	6 033	1 650	1 161	148 764	167 117
	Pots	220	302			27	73		5 535 633	5 536 255
	Trammel	22 682	7 718	513	2 085	15 815	19 411	4 071	113 230	185 525
2007	Dredge	28	70				46		2 703 717	2 703 861
	Gill	4 338	13 000	475		2 881	39 675	5 003	261 559	326 931
	Longline	230	111 750	28		70	37	1 100	98 633	211 848
	Unknown								1 029	1 029
	Otter	4 364	928	58	180	5 399	2 215	1 670	74 324	89 138
	Pel.Trawl	50				7			810	867
	Pots	240	196			10	5		5 751 257	5 751 708
	Trammel	32 542	11 381	2 308	42	16 182	22 742	135	142 866	228 198

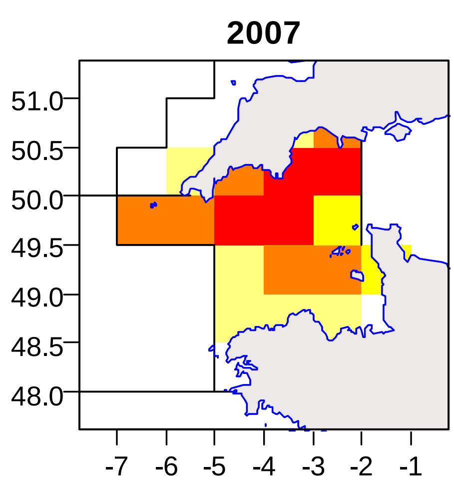
8.8. Spatial distribution patterns of effective fishing effort of trawled gears 2003-2007

Figure 8.8.1 shows the spatial distribution of the effective fishing effort for beam trawl fleets (3a) during the period 2003 to 2007. The pattern seems similar for the whole period. Although there might be indications of a slight increase of the effort along French coasts in 2007, it is questionable if this increase is significant.

Figure 8.8.2 shows the spatial distribution of the effective fishing effort for static nets with mesh size <220mm (3b) during the period 2003 to 2007. Until 2005, the fishing effort was more important along French coasts but it seems to have moved to the middle of the area 7e and along English coasts. In 2007, the fishing effort seems to have decreased slightly and has been concentrated more in the middle of the area.

Figure 8.8.3 shows the spatial distribution of the effective fishing effort for the unallocated gears ("none-none") during the period 2003 to 2007. Apart from 2005, the activity of the unallocated gears was most prevalent in the coastal areas in 7e.





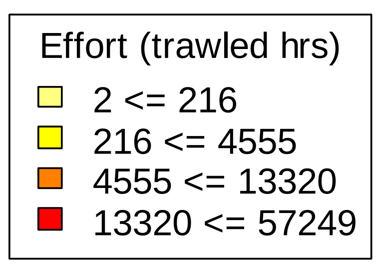


Figure 8.8.1 : Western Channel. Spatial distribution of effective fishing effort. Beam trawl fleet (3a)

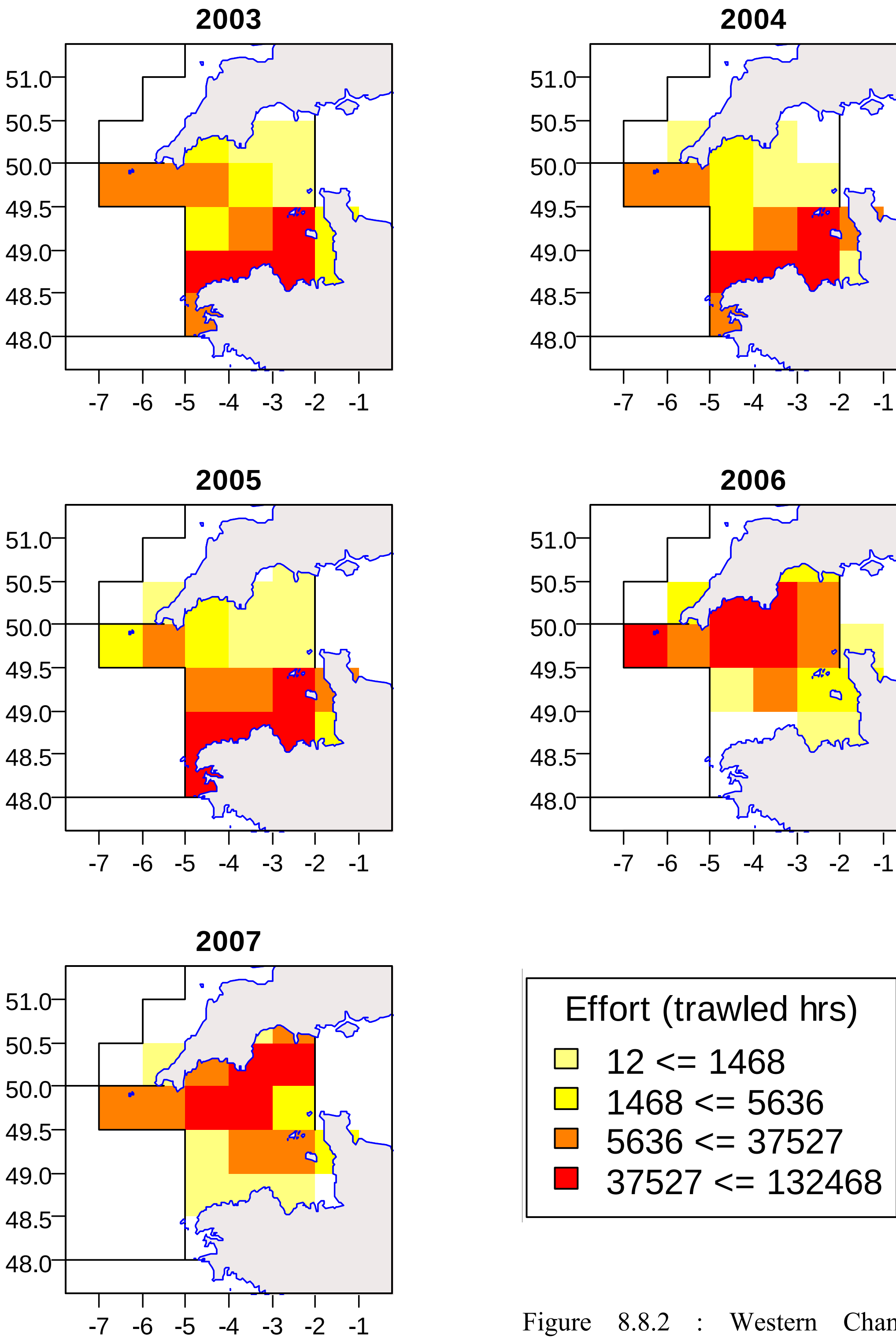
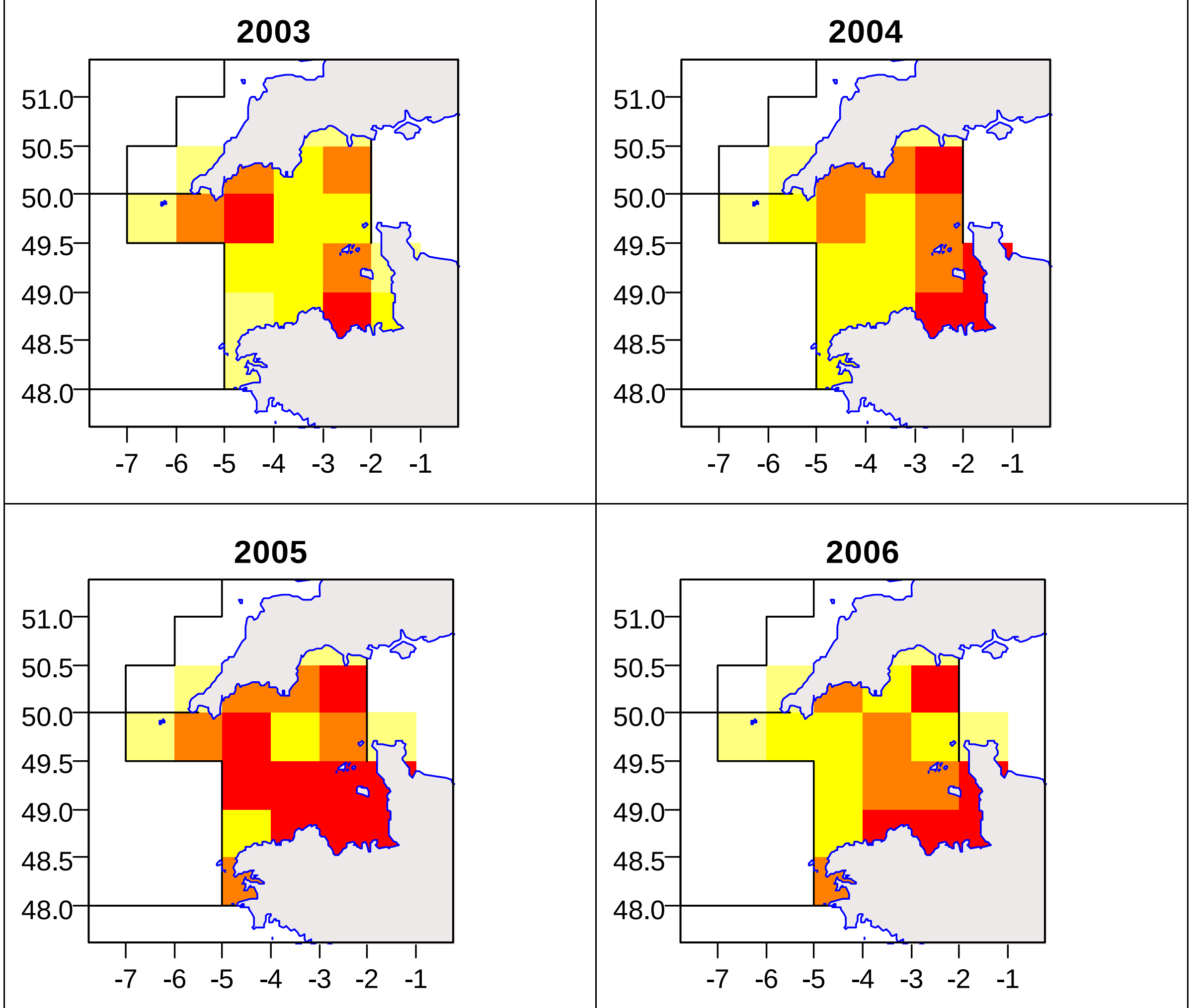
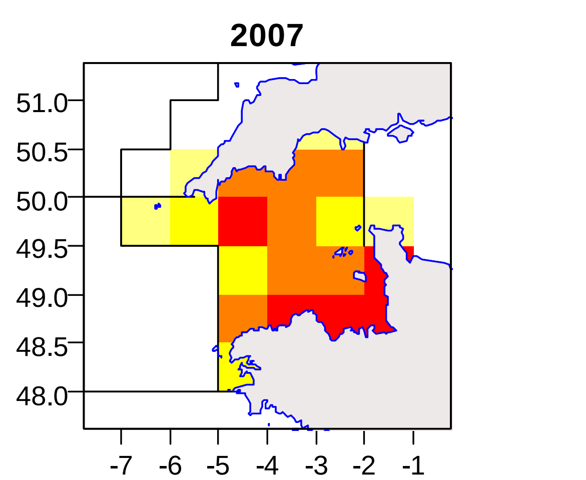


Figure 8.8.2 : Western Channel. Spatial distribution of effective fishing effort for static nets with mesh size <220mm (3b)





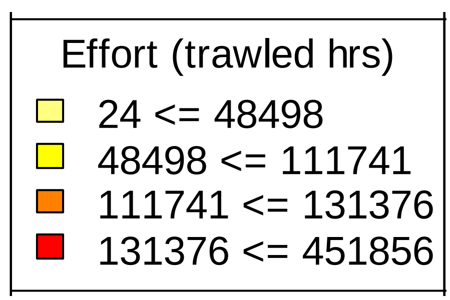


Figure 8.8.3 : Western Channel. Spatial distribution of effective fishing effort for unallocated gears ("none-none")

9. CELTIC SEA

9.1. General

The Celtic Sea (ICES Divisions VIIbc,e-k) is not currently covered by the effort management scheme described under Annex II. However, the recent Commission proposals for the recovery of cod stocks within a revised recovery plan, also includes the Celtic Sea cod and puts forward ideas for an effort management regime to be applied in that area too.

It should be noted that the Celtic Sea cod stock definition covers ICES Divisions VIIe-k, while the cod in the ICES Divisions VIIb-c is considered to be the West Ireland stock.

Landings of cod from the ICES Divisions VIIb-c are very low: 27 tonnes in 2007 are reported (ICES-WGSSDS-2008). However, the overall fishing effort in that area, not dedicated to cod, may be large. This has to be kept in mind while looking at the results for the whole area.

Some relevant information on Division VIIe is presented in Section 8 of the report as part of the Annex IIc regulation covering sole. Since cod in Division VIIe is included in the Celtic Sea definition, fishing effort and catches for that area are also considered in this section.

Data available for the Celtic Sea

Catch and effort data have been provided by all Member States. Spanish data are only available since 2002, and in the case of the effort do not covered ICES Divisions VIIbc. Spanish effort data has been provided by mesh-size, but catch data are only disaggregated by gear.

Irish data are not disaggregated by mesh size before 2003. For this reason, only the period 2003-2007 should be taken as a true representation of trends, not the whole period (2000-2007) shown in the graphs.

The information on discards available to the Group is very partial and with the exception of the Belgian beam-trawlers (for which reliable estimates of discards have been provided), there is only some country-gear categories available for some years. In view of the small numbers of samples, the Group decided to consider landings only. However it should be kept in mind that discards reported to ICES have been substantial for some species and efforts to incorporate discards should be made in future.

Métiers in the Celtic Sea

It should be kept in mind that, as for the areas covered by Annex IIa, the correspondence between gear-mesh size category and métier in the Celtic Sea may be not straightforward. For instance, the *Nephrops* métier in the Celtic Sea may be part of mesh-size category 4aii for Irish vessels, while for France this metier is contributed to by mesh-size category 4aiv.

Furthermore, even within a same gear and mesh-size category, the impact of fishing on cod may be very different. The following shows a description of the French metiers in the Celtic Sea and the impact of each on cod. Further details of the methodology can be found in Appendix 2.

Figure 9.1.1 shows how the total fishing effort (as reported in the log-books) is allocated within each

French metier in 2000 and 2006. Figures 9.1.2 a-d. presents the species composition in the landings of each metier in 2000 and 2006. It should be noted that the choice of the year (here 2000 and 2006) does not really matter for the purpose of illustrating the potential impact of this approach in term of regulation.

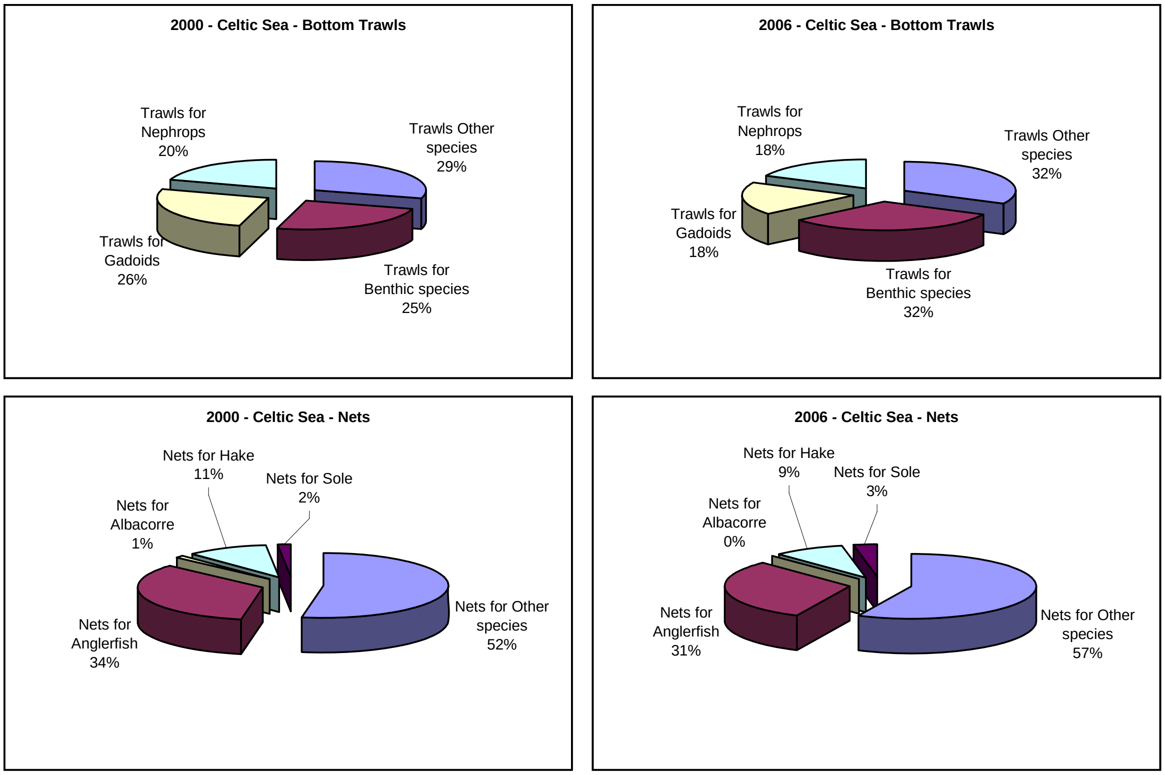


Figure 9.1.1 French contribution of each metier (using bottom trawls and nets) in 2000 and 2006 to the total fishing effort.

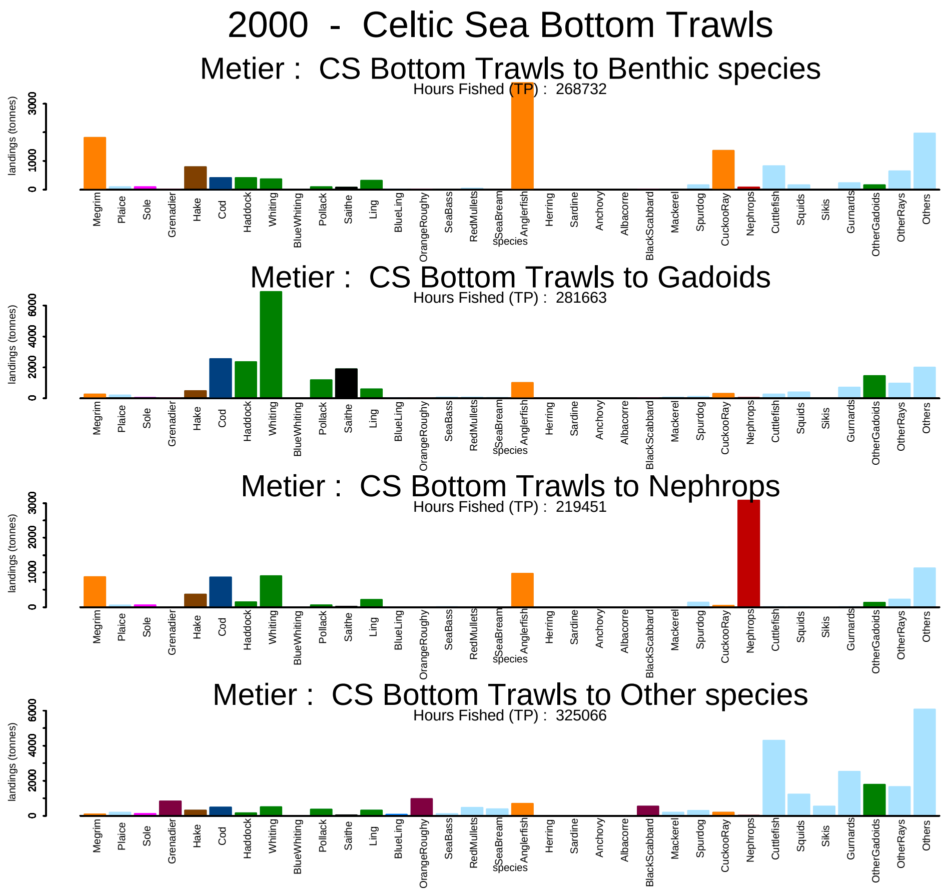


Figure 9.1.2.a. French species composition in the landings of each bottom trawl metier in 2000 (in tonnes – note scales vary between graphs).

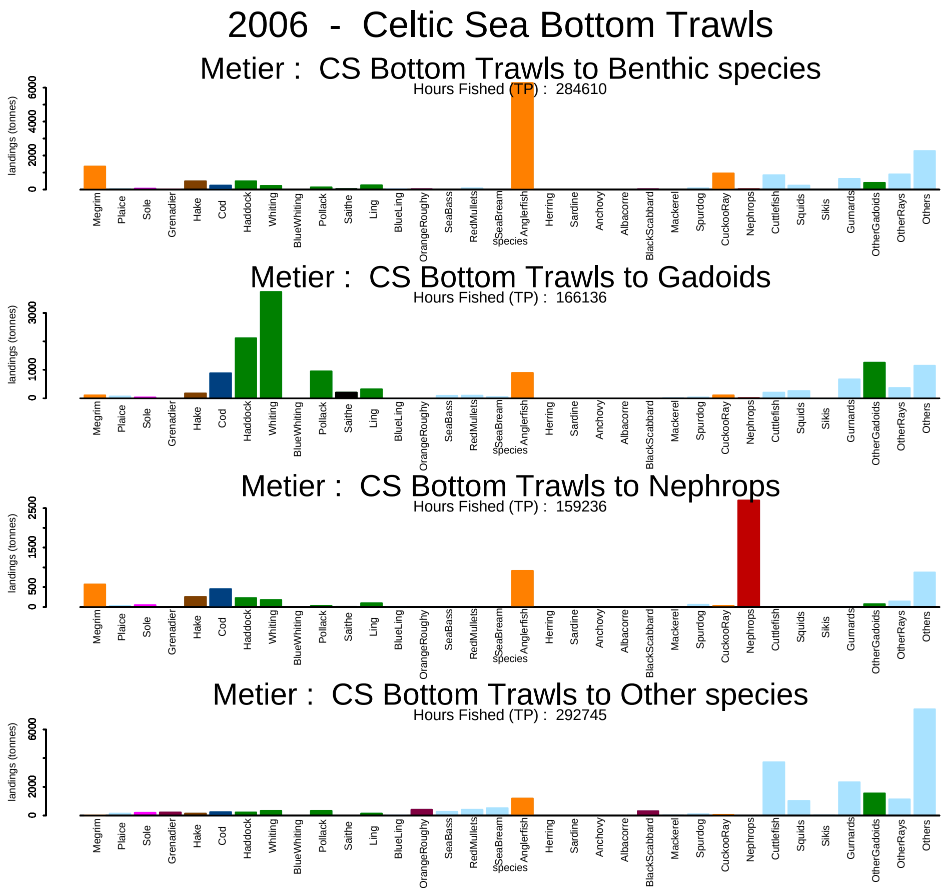


Figure 9.1.2.b. French species composition in the landings of each bottom trawl metier in 2006 (in tonnes – note scales vary between graphs).

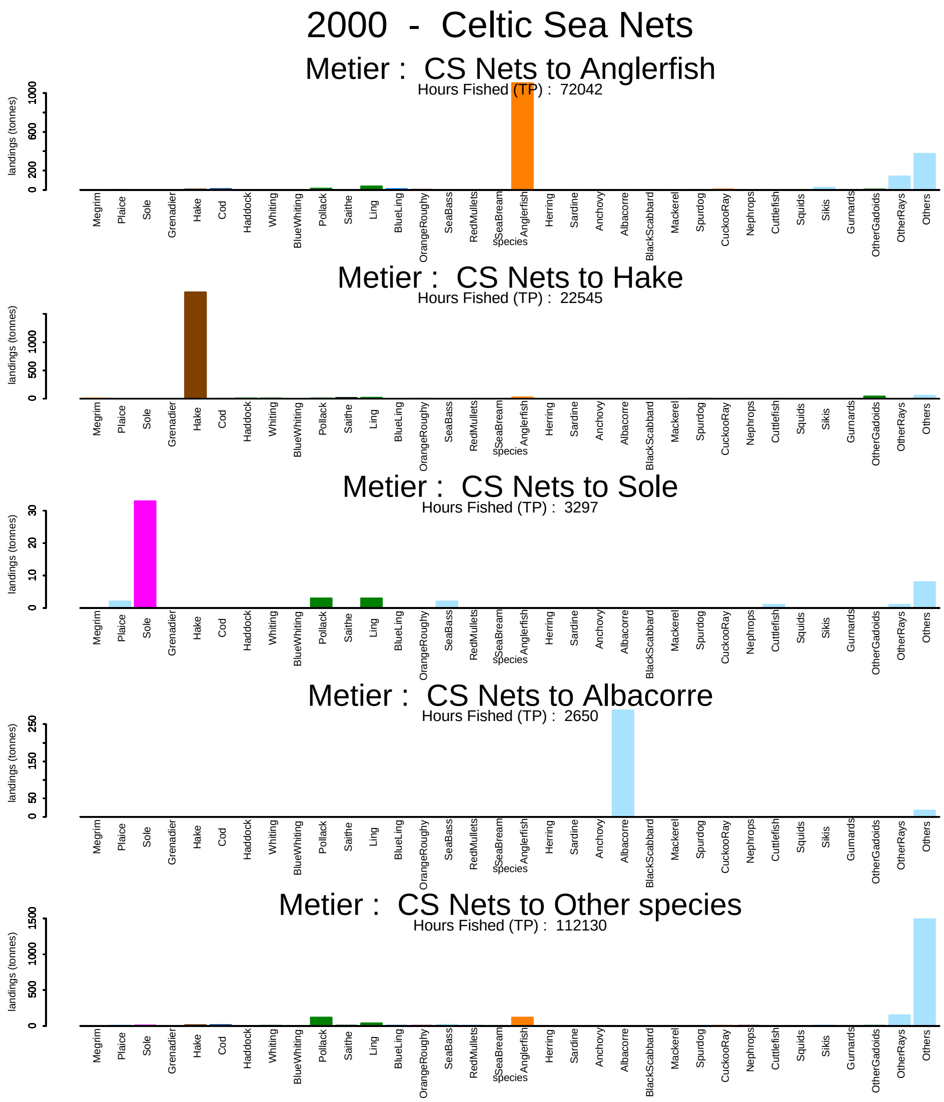


Figure 9.1.2.c. French species composition in the landings of each net metier in 2000 (in tonnes– note scales vary between graphs).

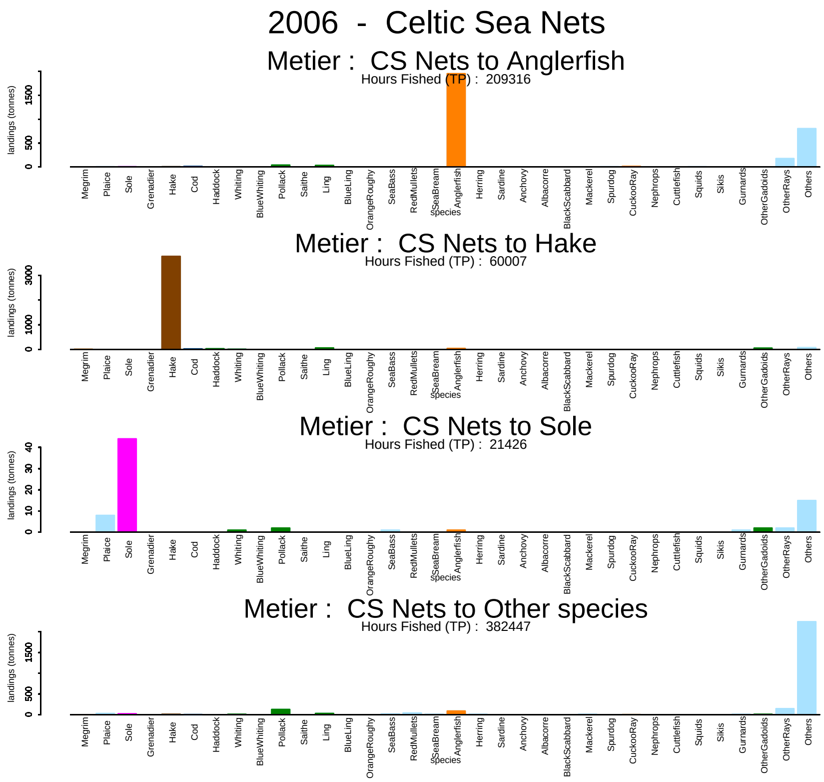


Figure 9.1.2.d. French species composition in the landings of each net metier in 2006 (in tonnes–note scales vary between graphs).

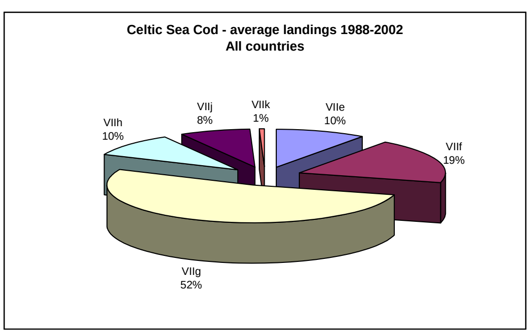
For France, most of the fishing operations are dedicated to benthic species, gadoids and Nephrops using the same mesh-size category (4aiv). Table 9.1.1 shows that the relative impact on the cod stock (as given by the average landings, and to a lesser extent by the percentage of cod) differs considerably depending on the metier.

Table 9.1.1 Percentage of cod by French metiers for the 2000-2007.

Métier COD	2000	2001	2002	2003	2004	2005	2006	2007	Average landings (t)
Bottom Trawls in the Celtic Sea to Benthic species	2.9%	4.6%	3.1%	2.1%	1.5%	1.1%	1.5%	1.7%	362
Bottom Trawls in the Celtic Sea to Gadoids species	10.6%	15.2%	20.2%	14.8%	7.9%	5.3%	6.4%	10.5%	2396
Bottom Trawls in the Celtic Sea to Nephrops	9.4%	11.6%	12.1%	11.2%	7.1%	5.5%	6.8%	9.9%	785
Bottom Trawls in the Celtic Sea to Other species	1.9%	2.2%	1.9%	1.4%	0.7%	0.8%	1.1%	1.3%	362
Nets in the Celtic Sea to Anglerfish	0.5%	0.4%	0.4%	0.4%	0.3%	0.2%	0.3%	0.2%	10
Nets in the Celtic Sea to Hake	0.1%	0.8%	0.9%	0.4%	0.2%	0.5%	0.5%	1.1%	24
Nets in the Celtic Sea to Sole	0.0%	0.0%	0.0%	0.0%	0.0%	0.8%	0.0%	0.0%	0
Nets in the Celtic Sea to Other species	0.5%	0.5%	0.5%	0.6%	0.2%	0.2%	0.3%	0.3%	11

In the context of a Cod recovery plan, given that cod is not uniformly abundant all over the Celtic Sea, it could be envisaged that a future effort regime could limit the fishing effort in a zone where the impact on the cod stock will be maximum.

Within the Celtic Sea, the landings of cod predominantly come from Divisions VIIf and VIIg. These areas contribute more than 70% to the total landings of cod from the Celtic Sea (Figures 9.1.3 and 9.1.4). Unfortunately, information on discards is too scarce to be taken into consideration.



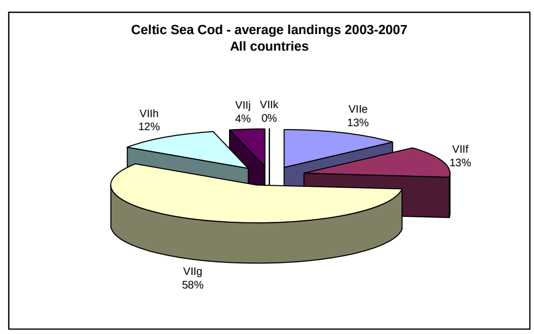


Figure 9.1.3. Contribution of each Division in the landings of cod (data from ICES-WGSSDS08)

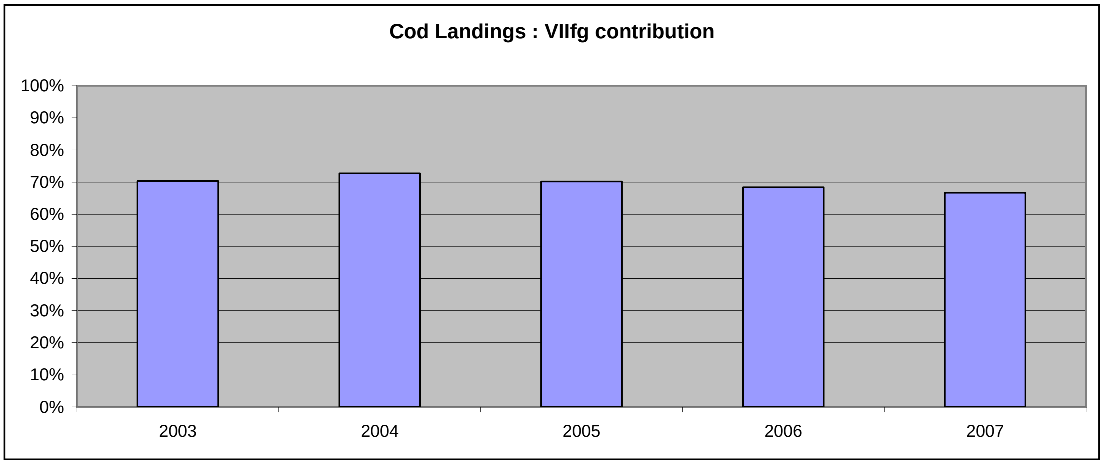


Figure 9.1.4.: Cod: Contribution of the landings from ICES Divisions VIIfg to the total landings from the Celtic Sea (ICES Divisions VIIbc,e-k) over 2003-2007

The average contribution of the Divisions VIIfg to the Celtic Sea landings of cod is about 70%. This contribution has been slightly decreasing in recent years (from 73% in 2004 to 67% in 2007); this decrease is probably due to the implementation of the closure of the Trevose box since 2005.

In view of the observation that VIIfg area could be considered as the target area for a cod recovery plan, the European Commission specifically requested that STECF-SGRST provide information for this. In each section the VIIfg area is considered in addition to the whole Celtic Sea (VIIbc,e-k) to highlight the contribution of this area to the total effort and to the cod landings, with a presentation of the gear categories and metiers.

9.2. Nominal effort

9.2.1. Gear category and member state

Even though there is at present no effort regulation in the Celtic Sea, the analysis below considered the same gear and mesh categories as used in other areas, as set in the cod recovery plan proposal. Table 9.2.1. lists the trends in effort by gear and mesh categories by country in kW*days, and Table 9.2.2. shows the same thing in GT*days.

For the same period (2000 to 2007), Table 9.2.3 lists the number of vessels by Member state and gear and mesh categories. STECF-SGRST emphasises that the number of vessels need to be interpreted with care and cannot be added across derogations as the individual vessels may have been engaged in more than one of the defined fleets, and thus counted more than once. As the effort values are by quarter and some Member Countries provided stratified data by fisheries, Table 9.2.3 represents the maximum number of vessels observed in any of the categories defined under the various categories in a given year. The annual values therefore present numbers of vessels, which indicate maximum values of vessels observed in any of the individual quarters or nationally defined fisheries which are identified to contribute to the defined categories.

Table 9.2.1. Trend in effort (kW*days at sea) by gear and mesh categories as given in Table 1 of Annex IIA for other areas (Coun. Reg. 40/2008) and Member State, 2000-2007. Note, data for Celtic Sea 7bcefghjk are shown first, followed by subset 7fg

ANNEX	REG AREA COMB	REG GEAR	SPECON	COUNTRY	2000	2001	2002	2003	2004	2005	2006	2007
IIx	7bcefghjk	4ai	none	ENG	54887	45180	39513	47439	30185	41448	43088	82178
IIx	7bcefghjk	4ai	none	FRA	102478	97521	10754	20580	11362	14719	22016	27913
IIx	7bcefghjk	4ai	none	GBG								201
IIx	7bcefghjk	4ai	none	IRL				11443	37751	55716	74458	125459
IIx	7bcefghjk	4ai	none	SCO		1490		745	4917	5364	298	20048
IIx	7bcefghjk	4ai	none	SPN			544	2977			2187	
IIx	7bcefghjk	4aii	none	ENG	6954280	4715883	1790184	1771404	1816166	1767888	1615611	1676260
IIx	7bcefghjk	4aii	none	FRA	18610968	19900660	21311559	19157085	20342080	24181807	18660941	17228067
IIx	7bcefghjk	4aii	none	GBG	15120	42228	27234			730	6377	10241
IIx	7bcefghjk	4aii	none	GBJ	69302	27445	34753	3559		8667	28248	42051
IIx	7bcefghjk	4aii	none	IRL				4573273	4438698	5787969	5091059	5466724
IIx	7bcefghjk	4aii	none	NED			24848	29513	46033	91626	109301	222006
IIx	7bcefghjk	4aii	none	NIR	28717	2620	2184		53672	72433	42938	20658
IIx	7bcefghjk	4aii	none	SCO	1236583	837294	396879	451909	332168	352870	383222	345952
IIx	7bcefghjk	4aii	none	SPN			1965303	2169000	379021		47771	1657476
IIx	7bcefghjk	4aiii	none	ENG	408543	345696	345937	411244	437814	414160	414646	423300
IIx	7bcefghjk	4aiii	none	FRA	1520937	1591091	1273476	786373	795810	830186	309272	320556
IIx	7bcefghjk	4aiii	none	GBG								820
IIx	7bcefghjk	4aiii	none	GBJ		4920	1926					
IIx	7bcefghjk	4aiii	none	IRL				483323	604119	783549	814975	728061
IIx	7bcefghjk	4aiii	none	SCO	191790	108352	25842	38925	113196	67050	5066	17582
IIx	7bcefghjk	4aiii	none	SPN			20652		2152			
IIx	7bcefghjk	4aiv	none	ENG	407027	1514441	3471891	2435882	2258268	1797728	2227810	2304225
IIx	7bcefghjk	4aiv	none	FRA	19528397	25227698	32564449	31909274	27678094	26820778	27641806	25485529
IIx	7bcefghjk	4aiv	none	GBG			5814					328
IIx	7bcefghjk	4aiv	none	GBI	11984							
IIx	7bcefghjk	4aiv	none	GBJ		6396	2296					
IIx	7bcefghjk	4aiv	none	IOM	11984							
IIx	7bcefghjk	4aiv	none	IRL				5251612	4443230	4810573	3804668	3814683
IIx	7bcefghjk	4aiv	none	NIR	7896	20675	12016	7641		716	5176	
IIx	7bcefghjk	4aiv	none	SCO	168933	349633	790985	791373	875483	1084678	779451	679941
IIx	7bcefghjk	4aiv	none	SPN			4107671	4170683	1629243	819031	654132	3293510
IIx	7bcefghjk	4av	none	ENG		1119			3354	6493		
IIx	7bcefghjk	4av	none	FRA	58023	207552	45807	113041	62711	73073	16590	72907
IIx	7bcefghjk	4av	none	IRL				372092	292860	15983	144323	299810
IIx	7bcefghjk	4av	none	NED			367					
IIx	7bcefghjk	4av	none	SCO			1701	11397	2513			
IIx	7bcefghjk	4av	none	SPN			8784	17408			4447	
IIx	7bcefghjk	4bi	none	BEL	1716560	1703662	1737026	2243305	2909322	2484038	2113073	2039098
IIx	7bcefghjk	4bi	none	ENG	5319656	5717056	5346241	6030498	5693805	5656783	5218550	4951234
IIx	7bcefghjk	4bi	none	FRA		29328		20717	124057	146269	136307	191911
IIx	7bcefghjk	4bi	none	GBJ	168393	276796	275554	284450	365302	202641		
IIx	7bcefghjk	4bi	none	IRL				1828886	1474347	1922502	1792998	1697610
IIx	7bcefghjk	4bi	none	NED				1471	1470			
IIx	7bcefghjk	4bi	none	SCO								3666
IIx	7bcefghjk	4bii	none	ENG	138457	1920	33936	7302	2032		60385	68251
IIx	7bcefghjk	4bii	none	FRA						1956		308
IIx	7bcefghjk	4bii	none	GBJ	5040	530	3024					
IIx	7bcefghjk	4bii	none	IRL				1504824	517623	936635	284383	92108
IIx	7bcefghjk	4biii	none	ENG	6456	21128	12359	2445	1082	27492		
IIx	7bcefghjk	4biii	none	FRA							38625	
IIx	7bcefghjk	4biii	none	IRL				346621	349348	195322	66595	38606
IIx	7bcefghjk	4biv	none	ENG					52079			
IIx	7bcefghjk	4biv	none	IRL				14427				
IIx	7bcefghjk	4ci	none	ENG	18110	20674	68373	23765	92930	34827	50880	44609
IIx	7bcefghjk	4ci	none	FRA	56288	95430	61261	133903	26841	148075	69631	44063
IIx	7bcefghjk	4ci	none	IRL				28500	12143	488544	16228	15017
IIx	7bcefghjk	4ci	none	SCO	25313			34086	10592			
IIx	7bcefghjk	4ci	none	SPN			3228	9702		2161	10661	290

Table 9.2.1 continued

ANNEX	REG AREA COMB	REG GEAR	SPECON	COUNTRY	2000	2001	2002	2003	2004	2005	2006	2007
IIx	7bcefghjk	4cii	none	ENG	1031583	702369	796280	1063382	697060	570620	525371	369234
IIx	7bcefghjk	4cii	none	FRA	827234	1263109	2142629	2360754	2616467	3080035	2674157	2457287
IIx	7bcefghjk	4cii	none	IRL				494178	420993	191206	454978	424479
IIx	7bcefghjk	4cii	none	SCO	347765	192554	42971	201381	172865	60423		3240
IIx	7bcefghjk	4cii	none	SPN			553926	717472	240983	77851	165176	259603
IIx	7bcefghjk	4ciii	none	ENG	206098	274807	435074	161711	223427	267260	112231	118354
IIx	7bcefghjk	4ciii	none	FRA	58592	261006	239937	139037	169433	68871	52444	2458
IIx	7bcefghjk	4ciii	none	GER	26520	104312	115362	99008		13260		
IIx	7bcefghjk	4ciii	none	IRL				130030	93860	25092	68369	97750
IIx	7bcefghjk	4ciii	none	SCO			6002		31863	43105		
IIx	7bcefghjk	4civ	none	ENG	493259	508290	442434	805442	1181367	742128	266096	439176
IIx	7bcefghjk	4civ	none	FRA	552381	674918	427765	443343	542819	651247	415715	970085
IIx	7bcefghjk	4civ	none	GER	384443	290794	260581	267528	456810	376932	30758	171066
IIx	7bcefghjk	4civ	none	IRL				8644	39257	3004	57489	52525
IIx	7bcefghjk	4civ	none	SCO	78215	156299	201023	231787	428526	395405	189636	189876
IIx	7bcefghjk	4d	none	ENG	8630	4466	936	18276	40887	27241	70852	30088
IIx	7bcefghjk	4d	none	FRA	295195	590536	572833	516335	767523	1058651	996315	1070041
IIx	7bcefghjk	4d	none	SCO	74563	102966	112004	50501	13362			
IIx	7bcefghjk	4e	none	ENG	486590	433512	482116	385755	332419	322941	472268	655590
IIx	7bcefghjk	4e	none	FRA	271572	154526	125773	262098	348383	419902	713688	892319
IIx	7bcefghjk	4e	none	IRL	74938	129730	66150	80246	3987	72930	1265	14386
IIx	7bcefghjk	4e	none	SCO	212089	298386	286096	136410	6160	51196	249938	257928
IIx	7bcefghjk	4e	none	SPN			3985989	5140865	5350271	4562198	3043057	4298801
IIx	7bcefghjk	none	none	BEL	24474	20440	24727	16039	72622	114506	255505	298049
IIx	7bcefghjk	none	none	ENG	2781328	2404686	2518764	2136251	2400377	2747888	2598982	2588929
IIx	7bcefghjk	none	none	FRA	2231223	2119817	2452234	2245573	3109557	2977293	3429231	3537397
IIx	7bcefghjk	none	none	GBG	111706	135158	11336		75936	56448	39437	67052
IIx	7bcefghjk	none	none	GBI	13000	21775	19240				23622	1488
IIx	7bcefghjk	none	none	GBJ	127744	146052	86529	55311	3772		19963	
IIx	7bcefghjk	none	none	GER			50715	80703	22491	63504	36514	48338
IIx	7bcefghjk	none	none	IOM	13000	21775	19240				23622	
IIx	7bcefghjk	none	none	IRL	14716344	15019209	16208062	1424457	2958296	665429	304154	526542
IIx	7bcefghjk	none	none	NED			166976	66552	73374	53006	80073	44164
IIx	7bcefghjk	none	none	SCO	516404	648698	546116	585806	606517	840474	718031	508335
IIx	7bcefghjk	none	none	SPN			192168	457958	5301242	6128657	5610669	1550197

Table 9.2.1 cont

ANNEX	REG AREA COMB	REG GEAR	SPECON	COUNTRY	2000	2001	2002	2003	2004	2005	2006	2007
IIy	7fg	4ai	none	ENG	8206	358			373	1119		
IIy	7fg	4ai	none	FRA	45005	13833						
IIy	7fg	4ai	none	IRL					24372	2173	16626	11918
IIy	7fg	4aii	none	ENG	376459	304784	227657	258667	234972	251531	304633	232452
IIy	7fg	4aii	none	FRA	4127667	2982903	1710757	1483733	1098789	1559601	527355	667877
IIy	7fg	4aii	none	GBG			421					
IIy	7fg	4aii	none	GBJ	742							
IIy	7fg	4aii	none	IRL				2007097	1940161	3141282	2666427	2697310
IIy	7fg	4aii	none	NED						0		
IIy	7fg	4aii	none	NIR	28717	2620	2184		52370	72433	42938	20658
IIy	7fg	4aii	none	SCO	2869			4770	12285	4095	2828	
IIy	7fg	4aii	none	SPN			6886	23611	1050			426
IIy	7fg	4aiii	none	ENG	8521	11294	15239	18595		187	4116	
IIy	7fg	4aiii	none	FRA	127004	90121	19382	330	6034	6620		
IIy	7fg	4aiii	none	IRL				214795	301403	249510	172434	210673
IIy	7fg	4aiii	none	SCO	1996							
IIy	7fg	4aiv	none	ENG	24631	129229	164396	111760	119670	80093	86399	74500
IIy	7fg	4aiv	none	FRA	10923591	13837224	17185454	15624114	12922246	11824486	11277737	9665175
IIy	7fg	4aiv	none	GBI	11984							
IIy	7fg	4aiv	none	IOM	11984							
IIy	7fg	4aiv	none	IRL				661048	705948	882044	1072345	1420039
IIy	7fg	4aiv	none	NIR	7896	20675	12016	7641		716	5176	
IIy	7fg	4aiv	none	SCO	979	11316	5266	9622	7701		9616	4479
IIy	7fg	4aiv	none	SPN			11730	8534	6598		2152	42587
IIy	7fg	4av	none	ENG		931			2538			
IIy	7fg	4av	none	FRA		47040	18816		13051			
IIy	7fg	4av	none	IRL				36219	4420		658	8186
IIy	7fg	4bi	none	BEL	1694502	1665028	1584779	2072164	2603236	2133030	1768934	1594884
IIy	7fg	4bi	none	ENG	1370123	1470284	915302	1049702	1012847	785343	630874	567851
IIy	7fg	4bi	none	FRA						7920		176
IIy	7fg	4bi	none	GBJ	69119	86593	94389	151639	145409	46377		
IIy	7fg	4bi	none	IRL				1449963	1062262	1485468	1537853	1505637
IIy	7fg	4bii	none	ENG	13441	534	6806	747			14586	2508
IIy	7fg	4bii	none	GBJ	4368		3024					
IIy	7fg	4bii	none	IRL				1088421	461206	812834	242863	79154
IIy	7fg	4biii	none	ENG		468	5304					
IIy	7fg	4biii	none	FRA							32445	
IIy	7fg	4biii	none	IRL				233446	269596	191144	66595	26230
IIy	7fg	4biv	none	ENG					8787			
IIy	7fg	4biv	none	IRL				9699				
IIy	7fg	4ci	none	ENG	10427	7976	28373	10611	70441	30872	45292	39725
IIy	7fg	4ci	none	FRA	11676	1472		3564	909	9396	14858	
IIy	7fg	4ci	none	IRL				28160	3884	246884	7002	4433
IIy	7fg	4cii	none	ENG	321753	218525	389176	374329	296102	294904	260105	249136
IIy	7fg	4cii	none	FRA	19005	8900	17925	39201	50905	63280	5224	13050
IIy	7fg	4cii	none	IRL				135960	220563	90574	116634	131990
IIy	7fg	4cii	none	SCO				689	721	1337		
IIy	7fg	4cii	none	SPN			1191	1352		662	1213	404
IIy	7fg	4ciii	none	ENG	52594	36246	29550	15186	21142	10590	6625	7000
IIy	7fg	4ciii	none	FRA	11172			16219	28101	26809		
IIy	7fg	4ciii	none	IRL				60031	73529	25092	68287	90327
IIy	7fg	4civ	none	ENG	14397	41089	47471	21866	124446	95548	90582	81416
IIy	7fg	4civ	none	FRA	63092	213795	20739	47304	48600	19703	9044	336
IIy	7fg	4civ	none	IRL					2957		30200	26123
IIy	7fg	4d	none	ENG	55	2092	936	1570	23918	9278	26696	18491
IIy	7fg	4d	none	FRA			1680	12484	2883	20736	98862	76937
IIy	7fg	4e	none	ENG	81132	81486	54879	28062	29619	43947	29885	14699
IIy	7fg	4e	none	FRA			900			8938	552	552
IIy	7fg	4e	none	IRL		1432				2167		3583
IIy	7fg	4e	none	SCO		886				221		
IIy	7fg	4e	none	SPN			12351	5799	9529	6807	4525	5257
IIy	7fg	none	none	BEL	24474	18875	24727	16039	72398	112336	252207	292991
IIy	7fg	none	none	ENG	317310	393734	378029	456961	517670	570966	409018	483825
IIy	7fg	none	none	FRA	118348	142307	41063	27759	59101	24308	36120	23226
IIy	7fg	none	none	GBG	1848	26342						20910
IIy	7fg	none	none	GBI		637	2262				3720	372
IIy	7fg	none	none	GBJ	9876	26568	19068	984	3772			
IIy	7fg	none	none	IOM		637	2262				3720	
IIy	7fg	none	none	IRL	5573208	5916238	5879441	636764	1338770	187653	52979	132239
IIy	7fg	none	none	NED			101734	0	0	1103	4853	0
IIy	7fg	none	none	SCO	5652	7748	1354		2000	16246	39971	13036
IIy	7fg	none	none	SPN			287	2855	71061	48055	86998	7098

Table 9.2.2. Trend in effort (GT*days at sea) by gear and mesh categories as given in Table 1 of Annex IIA for other areas (Coun. Reg. 48/2008) and Member State, 2000-2007. Note, data for Celtic Sea 7bcefghjk are shown first, followed by subset 7fg

ANNEX	REG AREA COMB	REG GEAR	SPECON	COUNTRY	2003	2004	2005	2006	2007
IIx	7bcefghjk	4ai	none	ENG	9541	5593	8210	8088	14880
IIx	7bcefghjk	4ai	none	FRA	3874	1870	2307	2849	4640
IIx	7bcefghjk	4ai	none	GBG					29
IIx	7bcefghjk	4ai	none	IRL	4300	16119	27205	34974	56525
IIx	7bcefghjk	4ai	none	SCO	102	750	789	41	6076
IIx	7bcefghjk	4ai	none	SPN	1231			1257	
IIx	7bcefghjk	4aii	none	ENG	437779	472025	469292	377123	409928
IIx	7bcefghjk	4aii	none	FRA	4336870	4456218	5370618	4181379	3798849
IIx	7bcefghjk	4aii	none	GBG			110	993	1659
IIx	7bcefghjk	4aii	none	GBJ	688		1548	5046	7512
IIx	7bcefghjk	4aii	none	IRL	1651263	1648364	2183514	1914852	2060395
IIx	7bcefghjk	4aii	none	NED	10336	16034	32300	39993	152511
IIx	7bcefghjk	4aii	none	NIR		16110	22639	13481	5626
IIx	7bcefghjk	4aii	none	SCO	194965	168152	160660	161200	135823
IIx	7bcefghjk	4aii	none	SPN	1717936	323431		32401	1321366
IIx	7bcefghjk	4aiii	none	ENG	53445	56121	44428	94164	76487
IIx	7bcefghjk	4aiii	none	FRA	148219	156899	159955	58974	64677
IIx	7bcefghjk	4aiii	none	GBG					161
IIx	7bcefghjk	4aiii	none	IRL	173314	221776	340221	360765	286877
IIx	7bcefghjk	4aiii	none	SCO	5476	26494	9730	742	2552
IIx	7bcefghjk	4aiii	none	SPN		1188			
IIx	7bcefghjk	4aiv	none	ENG	1001310	964825	789064	960252	1022799
IIx	7bcefghjk	4aiv	none	FRA	7359289	6431877	6318757	6353952	6069816
IIx	7bcefghjk	4aiv	none	GBG					64
IIx	7bcefghjk	4aiv	none	IRL	2174111	1858776	1888129	1437061	1422849
IIx	7bcefghjk	4aiv	none	NIR	2239		152	1584	
IIx	7bcefghjk	4aiv	none	SCO	382042	394425	486146	406637	342709
IIx	7bcefghjk	4aiv	none	SPN	2754651	1144263	561053	497887	2529315
IIx	7bcefghjk	4av	none	ENG		918	2389		
IIx	7bcefghjk	4av	none	FRA	32306	12016	19576	1806	16967
IIx	7bcefghjk	4av	none	IRL	131356	101736	5424	54686	113825
IIx	7bcefghjk	4av	none	SCO	6554	911			
IIx	7bcefghjk	4av	none	SPN	11836			2552	
IIx	7bcefghjk	4bi	none	BEL	978392	1286337	1100542	927271	893403
IIx	7bcefghjk	4bi	none	ENG	1676326	1612810	1612050	1496900	1445638
IIx	7bcefghjk	4bi	none	FRA	3421	21145	23769	18623	25545
IIx	7bcefghjk	4bi	none	GBJ	75549	100257	62699		
IIx	7bcefghjk	4bi	none	IRL	508554	405977	536090	557585	537398
IIx	7bcefghjk	4bi	none	NED	372	560			
IIx	7bcefghjk	4bi	none	SCO					1296
IIx	7bcefghjk	4bii	none	ENG	2041	373		15842	18303
IIx	7bcefghjk	4bii	none	FRA			348		30
IIx	7bcefghjk	4bii	none	IRL	403449	192651	300740	108177	29343
IIx	7bcefghjk	4biii	none	ENG	1040	399	8631		
IIx	7bcefghjk	4biii	none	FRA				8550	
IIx	7bcefghjk	4biii	none	IRL	92671	84003	54864	16920	9180
IIx	7bcefghjk	4biv	none	ENG		8489			
IIx	7bcefghjk	4biv	none	IRL	3643				
IIx	7bcefghjk	4ci	none	ENG	3630	6613	2187	5136	2516
IIx	7bcefghjk	4ci	none	FRA	34021	3603	28974	12945	5997
IIx	7bcefghjk	4ci	none	IRL	7973	5600	181478	4893	3967
IIx	7bcefghjk	4ci	none	SCO	18400	2664			
IIx	7bcefghjk	4ci	none	SPN	4277		883	6898	247
IIx	7bcefghjk	4cii	none	ENG	316477	226985	197590	181795	121131
IIx	7bcefghjk	4cii	none	FRA	665635	777966	969518	813067	781032
IIx	7bcefghjk	4cii	none	IRL	203540	161302	74723	190402	173532
IIx	7bcefghjk	4cii	none	SCO	111363	96459	27783		1024
IIx	7bcefghjk	4cii	none	SPN	400497	142269	54571	101770	154488
IIx	7bcefghjk	4ciii	none	ENG	62537	84341	94828	29845	33799

Table 9.2.2 cont

ANNEX	REG AREA COMB	REG GEAR	SPECON	COUNTRY	2003	2004	2005	2006	2007
IIx	7bcefghjk	4ciii	none	FRA	21134	30320	13004	7223	277
IIx	7bcefghjk	4ciii	none	GER	33152		4440		
IIx	7bcefghjk	4ciii	none	IRL	52201	32692	7723	16807	35511
IIx	7bcefghjk	4ciii	none	SCO		15867	23084		
IIx	7bcefghjk	4civ	none	ENG	404731	517114	308312	90666	171032
IIx	7bcefghjk	4civ	none	FRA	96563	106963	141190	76542	233985
IIx	7bcefghjk	4civ	none	GER	126150	199196	163240	14123	75117
IIx	7bcefghjk	4civ	none	IRL	3184	17010	964	10701	7949
IIx	7bcefghjk	4civ	none	SCO	139718	239542	220208	108818	92423
IIx	7bcefghjk	4d	none	ENG	9403	15625	8306	27231	8636
IIx	7bcefghjk	4d	none	FRA	67483	103693	151524	146613	158378
IIx	7bcefghjk	4d	none	SCO	29041	7684			
IIx	7bcefghjk	4e	none	ENG	136730	120760	113934	184929	251755
IIx	7bcefghjk	4e	none	FRA	49558	75687	83770	209689	277339
IIx	7bcefghjk	4e	none	IRL	40885	1774	28959	281	2944
IIx	7bcefghjk	4e	none	SCO	73341	4374	25555	118666	125637
IIx	7bcefghjk	4e	none	SPN	2745399	2874471	2542036	1829921	2557237
IIx	7bcefghjk	none	none	BEL	11838	49338	70882	125751	148393
IIx	7bcefghjk	none	none	ENG	476640	547711	619600	596197	582566
IIx	7bcefghjk	none	none	FRA	270422	401165	369502	397880	394887
IIx	7bcefghjk	none	none	GBG		14231	10579	7391	16579
IIx	7bcefghjk	none	none	GBI				5398	340
IIx	7bcefghjk	none	none	GBJ	11782	1212		6369	
IIx	7bcefghjk	none	none	GER	36417	10149	28656	16520	21882
IIx	7bcefghjk	none	none	IOM				5398	
IIx	7bcefghjk	none	none	IRL	434514	970978	174925	70563	96804
IIx	7bcefghjk	none	none	NED	17495	18548	14059	31963	16637
IIx	7bcefghjk	none	none	SCO	207912	212688	292588	243365	184297
IIx	7bcefghjk	none	none	SPN	302149	3826254	4613274	4231749	1118052

Table 9.2.2 cont

ANNEX	REG AREA COMB	REG GEAR	SPECON	COUNTRY	2003	2004	2005	2006	2007
IIy	7fg	4ai	none	ENG		16	363		
IIy	7fg	4ai	none	IRL		10679	941	7177	4109
IIy	7fg	4aii	none	ENG	52777	50976	57001	64273	52904
IIy	7fg	4aii	none	FRA	314303	243818	346487	113557	142716
IIy	7fg	4aii	none	IRL	690184	668223	1130214	910155	949453
IIy	7fg	4aii	none	NED			0		
IIy	7fg	4aii	none	NIR		15809	22639	13481	5626
IIy	7fg	4aii	none	SCO	1698	3864	1288	1669	
IIy	7fg	4aii	none	SPN	19311	993			456
IIy	7fg	4aiii	none	ENG	6523		16	686	
IIy	7fg	4aiii	none	FRA	60	1222	1780		
IIy	7fg	4aiii	none	IRL	72876	100661	83188	55491	68762
IIy	7fg	4aiv	none	ENG	36748	45088	33923	35293	31756
IIy	7fg	4aiv	none	FRA	3497385	2868213	2719452	2443703	2222641
IIy	7fg	4aiv	none	IRL	246920	247621	304326	373954	481912
IIy	7fg	4aiv	none	NIR	2239		152	1584	
IIy	7fg	4aiv	none	SCO	4146	3417		6142	2643
IIy	7fg	4aiv	none	SPN	7058	5498		1512	35197
IIy	7fg	4av	none	ENG		704			
IIy	7fg	4av	none	FRA		2736			
IIy	7fg	4av	none	IRL	14057	1530		228	3442
IIy	7fg	4bi	none	BEL	888804	1126492	930138	766307	691253
IIy	7fg	4bi	none	ENG	307879	308748	245188	202908	183417
IIy	7fg	4bi	none	FRA			1350		30
IIy	7fg	4bi	none	GBJ	37436	34020	15154		
IIy	7fg	4bi	none	IRL	413261	304132	416661	487779	487164
IIy	7fg	4bii	none	ENG	239			3944	664
IIy	7fg	4bii	none	IRL	278899	163720	257484	89743	25182
IIy	7fg	4biii	none	FRA				7182	
IIy	7fg	4biii	none	IRL	66257	66509	53704	16920	6899
IIy	7fg	4biv	none	ENG		1344			
IIy	7fg	4biv	none	IRL	2273				
IIy	7fg	4ci	none	ENG	2399	3880	1668	3288	2199
IIy	7fg	4ci	none	FRA	781	147	2088	3542	
IIy	7fg	4ci	none	IRL	7833	1691	85265	2028	1155
IIy	7fg	4cii	none	ENG	97489	96577	98393	84950	83379
IIy	7fg	4cii	none	FRA	8451	14683	22439	1451	3229
IIy	7fg	4cii	none	IRL	41314	71773	36994	41036	52274
IIy	7fg	4cii	none	SCO	318	332	546		
IIy	7fg	4cii	none	SPN	767		246	696	232
IIy	7fg	4ciii	none	ENG	3833	8797	2936	1782	1596
IIy	7fg	4ciii	none	FRA	2401	6699	6391		
IIy	7fg	4ciii	none	IRL	22017	26171	7723	16774	33059
IIy	7fg	4civ	none	ENG	5120	41331	34363	31601	26248
IIy	7fg	4civ	none	FRA	10366	10650	4697	2158	72
IIy	7fg	4civ	none	IRL		1531		5607	2378
IIy	7fg	4d	none	ENG	375	9056	2643	9567	5770
IIy	7fg	4d	none	FRA	2095	327	4544	21541	16797
IIy	7fg	4e	none	ENG	7870	10711	21888	14668	7318
IIy	7fg	4e	none	FRA			2355	285	147
IIy	7fg	4e	none	IRL			854		367
IIy	7fg	4e	none	SCO			40		
IIy	7fg	4e	none	SPN	3237	9212	6580	4177	4927
IIy	7fg	none	none	BEL	11838	48805	68317	123247	145840
IIy	7fg	none	none	ENG	51493	90463	105727	72694	84806
IIy	7fg	none	none	FRA	7196	13661	4871	9523	5967
IIy	7fg	none	none	GBG					6225
IIy	7fg	none	none	GBI				850	85
IIy	7fg	none	none	GBJ	316	1212			
IIy	7fg	none	none	IOM				850	
IIy	7fg	none	none	IRL	180156	429172	48306	14337	39302
IIy	7fg	none	none	NED	0	0	270	6512	0
IIy	7fg	none	none	SCO		586	4754	15756	5466
IIy	7fg	none	none	SPN	2460	60256	39446	73532	6386

Table 9.2.3. Trend in effort (maximum numbers of vessels over national fisheries and quarters) by gear and mesh categories as given in Table 1 of Annex IIA (Coun. Reg. 40/2008) and Member State, 2000-2007. . Data for Celtic Sea 7bcefghjk are shown first, followed by subset 7fg. Note that Spanish data were supplied by quarter and that totals across a year may include one vessel up to 4 times.

ANNEX	REG AREA COMB	REG GEAR	SPECON	COUNTRY	2003	2004	2005	2006	2007
IIx	7bcefghjk	4ai	none	ENG	3	3	2	3	5
IIx	7bcefghjk	4ai	none	FRA	13	3	3	4	7
IIx	7bcefghjk	4ai	none	GBG					1
IIx	7bcefghjk	4ai	none	IRL	2	4	8	4	10
IIx	7bcefghjk	4ai	none	SCO	1	2	2	1	1
IIx	7bcefghjk	4ai	none	SPN	3			3	
IIx	7bcefghjk	4aii	none	ENG	40	45	41	45	42
IIx	7bcefghjk	4aii	none	FRA	73	90	99	125	129
IIx	7bcefghjk	4aii	none	GBG			1	2	2
IIx	7bcefghjk	4aii	none	GBJ	1		1	1	1
IIx	7bcefghjk	4aii	none	IRL	59	51	69	63	75
IIx	7bcefghjk	4aii	none	NED	2	3	4	5	7
IIx	7bcefghjk	4aii	none	NIR		4	4	4	3
IIx	7bcefghjk	4aii	none	SCO	3	9	3	3	6
IIx	7bcefghjk	4aii	none	SPN	1152	683		49	1132
IIx	7bcefghjk	4aiii	none	ENG	17	17	18	15	13
IIx	7bcefghjk	4aiii	none	FRA	14	16	18	17	33
IIx	7bcefghjk	4aiii	none	GBG					1
IIx	7bcefghjk	4aiii	none	GBJ					
IIx	7bcefghjk	4aiii	none	IRL	10	10	9	9	14
IIx	7bcefghjk	4aiii	none	SCO	2	6	2	2	2
IIx	7bcefghjk	4aiii	none	SPN		3			
IIx	7bcefghjk	4aiv	none	ENG	15	14	11	10	11
IIx	7bcefghjk	4aiv	none	FRA	116	97	95	102	102
IIx	7bcefghjk	4aiv	none	GBG					1
IIx	7bcefghjk	4aiv	none	GBI					
IIx	7bcefghjk	4aiv	none	GBJ					
IIx	7bcefghjk	4aiv	none	IOM					
IIx	7bcefghjk	4aiv	none	IRL	36	26	27	30	34
IIx	7bcefghjk	4aiv	none	NIR	2		1	1	
IIx	7bcefghjk	4aiv	none	SCO	5	5	5	3	4
IIx	7bcefghjk	4aiv	none	SPN	2015	1645	453	285	1900
IIx	7bcefghjk	4av	none	ENG		1	1		
IIx	7bcefghjk	4av	none	FRA	3	2	6	3	5
IIx	7bcefghjk	4av	none	IRL	4	2	1	2	7
IIx	7bcefghjk	4av	none	NED					
IIx	7bcefghjk	4av	none	SCO	1	1			
IIx	7bcefghjk	4av	none	SPN	14			7	
IIx	7bcefghjk	4bi	none	BEL	47	56	57	45	50
IIx	7bcefghjk	4bi	none	ENG	34	33	32	29	31
IIx	7bcefghjk	4bi	none	FRA	2	6	6	5	7
IIx	7bcefghjk	4bi	none	GBJ	4	4	2		
IIx	7bcefghjk	4bi	none	IRL	12	14	18	18	17
IIx	7bcefghjk	4bi	none	NED	1	1			
IIx	7bcefghjk	4bi	none	SCO					1
IIx	7bcefghjk	4bii	none	ENG	1	1		2	3
IIx	7bcefghjk	4bii	none	FRA			1		1
IIx	7bcefghjk	4bii	none	GBJ					
IIx	7bcefghjk	4bii	none	IRL	6	5	6	3	2
IIx	7bcefghjk	4biii	none	ENG	1	1	1		
IIx	7bcefghjk	4biii	none	FRA				1	
IIx	7bcefghjk	4biii	none	IRL	7	2	3	1	2
IIx	7bcefghjk	4biv	none	ENG		1			
IIx	7bcefghjk	4biv	none	IRL	1				
IIx	7bcefghjk	4ci	none	ENG	2	6	3	2	3
IIx	7bcefghjk	4ci	none	FRA	4	3	5	4	6
IIx	7bcefghjk	4ci	none	IRL	2	2	13	3	2
IIx	7bcefghjk	4ci	none	SCO	1	1			
IIx	7bcefghjk	4ci	none	SPN	10		5	13	1

Table 9.2.3 cont

ANNEX	REG AREA COMB	REG GEAR	SPECON	COUNTRY	2003	2004	2005	2006	2007
IIx	7bcefghjk	4cii	none	ENG	29	23	18	17	11
IIx	7bcefghjk	4cii	none	FRA	28	29	28	32	33
IIx	7bcefghjk	4cii	none	IRL	8	9	6	9	13
IIx	7bcefghjk	4cii	none	SCO	3	3	1		1
IIx	7bcefghjk	4cii	none	SPN	503	135	79	163	264
IIx	7bcefghjk	4ciii	none	ENG	16	12	8	8	12
IIx	7bcefghjk	4ciii	none	FRA	12	12	8	10	3
IIx	7bcefghjk	4ciii	none	GER	1		1		
IIx	7bcefghjk	4ciii	none	IRL	4	5	1	8	12
IIx	7bcefghjk	4ciii	none	SCO		1	2		
IIx	7bcefghjk	4civ	none	ENG	8	17	14	15	13
IIx	7bcefghjk	4civ	none	FRA	16	18	19	26	36
IIx	7bcefghjk	4civ	none	GER	4	4	4	2	2
IIx	7bcefghjk	4civ	none	IRL	1	3	1	5	8
IIx	7bcefghjk	4civ	none	SCO	3	3	3	3	2
IIx	7bcefghjk	4d	none	ENG	1	4	4	4	5
IIx	7bcefghjk	4d	none	FRA	11	12	17	25	35
IIx	7bcefghjk	4d	none	SCO	1	1			
IIx	7bcefghjk	4e	none	ENG	8	15	11	9	12
IIx	7bcefghjk	4e	none	FRA	16	20	23	34	28
IIx	7bcefghjk	4e	none	IRL	3	1	5	2	4
IIx	7bcefghjk	4e	none	SCO	3	2	2	3	4
IIx	7bcefghjk	4e	none	SPN	3232	3102	3232	1904	2490
IIx	7bcefghjk	none	none	BEL	2	3	6	7	6
IIx	7bcefghjk	none	none	ENG	38	36	35	37	36
IIx	7bcefghjk	none	none	FRA	122	121	134	158	172
IIx	7bcefghjk	none	none	GBG		1	1	1	2
IIx	7bcefghjk	none	none	GBI				1	1
IIx	7bcefghjk	none	none	GBJ	1	1		1	
IIx	7bcefghjk	none	none	GER	1	1	1	1	2
IIx	7bcefghjk	none	none	IOM				1	
IIx	7bcefghjk	none	none	IRL	13	16	11	26	41
IIx	7bcefghjk	none	none	NED	3	3	8	4	4
IIx	7bcefghjk	none	none	SCO	5	9	8	15	10
IIx	7bcefghjk	none	none	SPN	425	2538	2777	2522	1720

Table 9.2.3 cont

ANNEX	REG AREA COMB	REG GEAR	SPECON	COUNTRY	2003	2004	2005	2006	2007
IIy	7fg	4ai	none	ENG		1	1		
IIy	7fg	4ai	none	FRA					
IIy	7fg	4ai	none	IRL		4	2	4	3
IIy	7fg	4aii	none	ENG	11	11	13	9	11
IIy	7fg	4aii	none	FRA	15	18	15	12	16
IIy	7fg	4aii	none	GBG					
IIy	7fg	4aii	none	GBJ					
IIy	7fg	4aii	none	IRL	59	51	69	63	75
IIy	7fg	4aii	none	NED			1		
IIy	7fg	4aii	none	NIR		4	4	4	3
IIy	7fg	4aii	none	SCO	1	1	1	1	
IIy	7fg	4aii	none	SPN	31	3			2
IIy	7fg	4aiii	none	ENG	3		1	2	
IIy	7fg	4aiii	none	FRA	1	1	1		
IIy	7fg	4aiii	none	IRL	10	10	9	9	14
IIy	7fg	4aiii	none	SCO					
IIy	7fg	4aiv	none	ENG	8	9	6	6	5
IIy	7fg	4aiv	none	FRA	89	85	67	70	76
IIy	7fg	4aiv	none	GBI					
IIy	7fg	4aiv	none	IOM					
IIy	7fg	4aiv	none	IRL	19	20	24	30	34
IIy	7fg	4aiv	none	NIR	2		1	1	
IIy	7fg	4aiv	none	SCO	2	2		1	1
IIy	7fg	4aiv	none	SPN	15	14		4	64
IIy	7fg	4av	none	ENG		1			
IIy	7fg	4av	none	FRA		1			
IIy	7fg	4av	none	IRL	2	1		1	2
IIy	7fg	4bi	none	BEL	47	56	57	45	50
IIy	7fg	4bi	none	ENG	27	20	18	14	18
IIy	7fg	4bi	none	FRA			1		1
IIy	7fg	4bi	none	GBJ	4	3	2		
IIy	7fg	4bi	none	IRL	12	14	18	18	17
IIy	7fg	4bii	none	ENG	1			1	2
IIy	7fg	4bii	none	GBJ					
IIy	7fg	4bii	none	IRL	6	5	6	3	2
IIy	7fg	4biii	none	ENG					
IIy	7fg	4biii	none	FRA				1	
IIy	7fg	4biii	none	IRL	7	2	3	1	2
IIy	7fg	4biv	none	ENG		1			
IIy	7fg	4biv	none	IRL	1				
IIy	7fg	4ci	none	ENG	2	2	3	2	3
IIy	7fg	4ci	none	FRA	1	1	1	1	
IIy	7fg	4ci	none	IRL	2	2	13	2	1
IIy	7fg	4cii	none	ENG	21	20	17	17	11
IIy	7fg	4cii	none	FRA	3	5	8	2	3
IIy	7fg	4cii	none	IRL	6	9	6	9	12
IIy	7fg	4cii	none	SCO	1	1	1		
IIy	7fg	4cii	none	SPN	3		2	3	1
IIy	7fg	4ciii	none	ENG	6	6	5	3	5
IIy	7fg	4ciii	none	FRA	1	1	1		
IIy	7fg	4ciii	none	IRL	4	5	1	8	12
IIy	7fg	4civ	none	ENG	7	10	10	8	9
IIy	7fg	4civ	none	FRA	1	1	1	2	1
IIy	7fg	4civ	none	IRL		1		4	8
IIy	7fg	4d	none	ENG	1	3	4	4	3
IIy	7fg	4d	none	FRA	2	1	1	2	2
IIy	7fg	4e	none	ENG	4	2	4	4	4
IIy	7fg	4e	none	FRA			1	1	1
IIy	7fg	4e	none	IRL			1		2
IIy	7fg	4e	none	SCO			1		
IIy	7fg	4e	none	SPN	7	16	10	9	7
IIy	7fg	none	none	BEL	2	3	6	7	6
IIy	7fg	none	none	ENG	20	21	24	20	20
IIy	7fg	none	none	FRA	2	3	2	3	3
IIy	7fg	none	none	GBG					1
IIy	7fg	none	none	GBI				1	1
IIy	7fg	none	none	GBJ	1	1			
IIy	7fg	none	none	IOM				1	
IIy	7fg	none	none	IRL	13	11	11	4	9
IIy	7fg	none	none	NED	1	1	1	1	1
IIy	7fg	none	none	SCO		1	2	5	2
IIy	7fg	none	none	SPN	5	75	37	152	17

9.2.2. Celtic Sea all

Effort contributions by vessels from different nations are shown in (Figure 9.2.2.1).Vessels from Belgium, France, Ireland, UK(E-W) and Spain operate in the Celtic Sea. In terms of kW*days, France contributes 55%, England and Ireland 14% each, Spain 11%, and Scotland and Belgium 2% each (average 2002-2007)

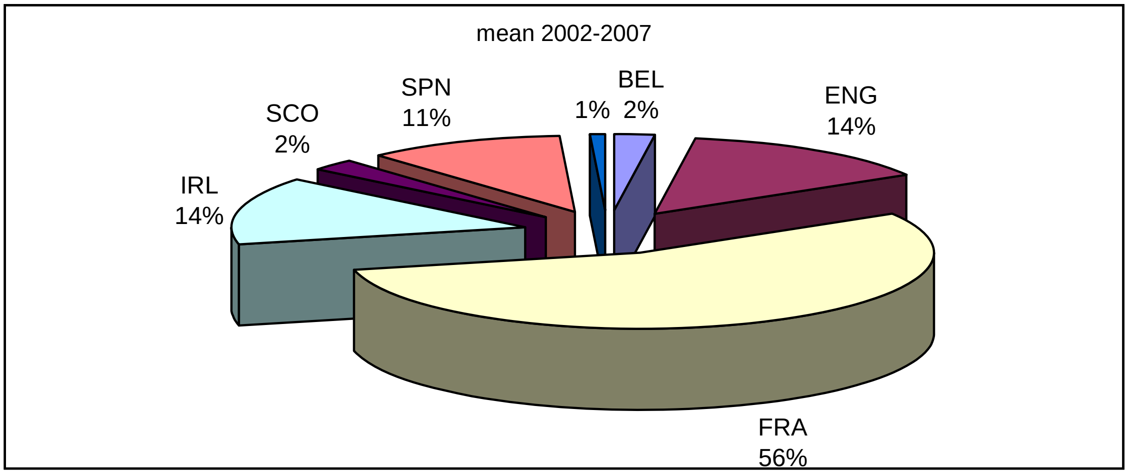


Figure 9.2.2.1 : Contribution of each country to the total effort in the Celtic Sea (mean 2002-2007).

Effort in the overall Celtic Sea, combined across countries and summarised by regulated gears (as designated in those areas covered by the existing Annex IIa) is shown in Tables 9.2.2.1 to 9.2.2.3.

Table 9.2.2.1 Trend in effort (kW*days at sea) by gear and mesh-size category in the Celtic Sea, 2000-2007.

ANNEX	REG AREA COMB	REG GEAR	SPECON	2000	2001	2002	2003	2004	2005	2006	2007
IIx	7bcefghjk	4ai	none	157365	144191	50811	83184	84215	117247	142047	255799
IIx	7bcefghjk	4aii	none	26914970	25526130	25552944	28155743	27407838	32263990	25985468	26669435
IIx	7bcefghjk	4aiii	none	2121270	2050059	1667833	1719865	1953091	2094945	1543959	1490319
IIx	7bcefghjk	4aiv	none	20136221	27118843	40955122	44566465	36884318	35333504	35113043	35578216
IIx	7bcefghjk	4av	none	58023	208671	56659	513938	361438	95549	165360	372717
IIx	7bcefghjk	4bi	none	7204609	7726842	7358821	10409327	10568303	10412233	9260928	8883519
IIx	7bcefghjk	4bii	none	143497	2450	36960	1512126	519655	938591	344768	160667
IIx	7bcefghjk	4biii	none	6456	21128	12359	349066	350430	222814	105220	38606
IIx	7bcefghjk	4biv	none				14427	52079			
IIx	7bcefghjk	4ci	none	99711	116104	132862	229956	142506	673607	147400	103979
IIx	7bcefghjk	4cii	none	2206582	2158032	3535806	4837167	4148368	3980135	3819682	3513843
IIx	7bcefghjk	4ciii	none	291210	640125	796375	529786	518583	417588	233044	218562
IIx	7bcefghjk	4civ	none	1508298	1630301	1331803	1756744	2648779	2168716	959694	1822728
IIx	7bcefghjk	4d	none	378388	697968	685773	585112	821772	1085892	1067167	1100129
IIx	7bcefghjk	4e	none	1045189	1016154	4946124	6005374	6041220	5429167	4480216	6119024
IIx	7bcefghjk	none	none	20535223	20537610	22296107	7068650	14624184	13647205	13139803	9170491

Table 9.2.2.2 Trend in effort (GT*days at sea) by gear and mesh-size category in the Celtic Sea, 2003-2007.

ANNEX	REG AREA COMB	REG GEAR	SPECON	2000	2001	2002	2003	2004	2005	2006	2007
IIx	7bcefghjk	4ai	none				19048	24332	38511	47209	82150
IIx	7bcefghjk	4aii	none				8349837	7100334	8240681	6726468	7893669
IIx	7bcefghjk	4aiii	none				380454	462478	554334	514645	430754
IIx	7bcefghjk	4aiv	none				13673642	10794166	10043301	9657373	11387552
IIx	7bcefghjk	4av	none				182052	115581	27389	59044	130792
IIx	7bcefghjk	4bi	none				3242614	3427086	3335150	3000379	2903280
IIx	7bcefghjk	4bii	none				405490	193024	301088	124019	47676
IIx	7bcefghjk	4biii	none				93711	84402	63495	25470	9180
IIx	7bcefghjk	4biv	none				3643	8489			
IIx	7bcefghjk	4ci	none				68301	18480	213522	29872	12727
IIx	7bcefghjk	4cii	none				1697512	1404981	1324185	1287034	1231207
IIx	7bcefghjk	4ciii	none				169024	163220	143079	53875	69587
IIx	7bcefghjk	4civ	none				770346	1079825	833914	300850	580506
IIx	7bcefghjk	4d	none				105927	127002	159830	173844	167014
IIx	7bcefghjk	4e	none				3045913	3077066	2794254	2343486	3214912
IIx	7bcefghjk	none	none				1769169	6052274	6194065	5738544	2580437

Table 9.2.2.3 Trend in nominal effort (maximum numbers of vessels over national fisheries and quarters) by gear and mesh-size category in the Celtic Sea, 2000-2007. Note that Spanish information is not included.

ANNEX	REG AREA COMB	REG GEAR	SPECON	2000	2001	2002	2003	2004	2005	2006	2007
IIx	7bcefghjk	4ai	none	8	6		19	12	15	12	24
IIx	7bcefghjk	4aii	none	147	122		178	202	222	248	265
IIx	7bcefghjk	4aiii	none	29	33		43	49	47	43	63
IIx	7bcefghjk	4aiv	none	100	132		174	142	139	146	152
IIx	7bcefghjk	4av	none	2	3		8	6	8	5	12
IIx	7bcefghjk	4bi	none	49	69		100	114	115	97	106
IIx	7bcefghjk	4bii	none	3	2		7	6	7	5	6
IIx	7bcefghjk	4biii	none	2	1		8	3	4	2	2
IIx	7bcefghjk	4biv	none				1	1			
IIx	7bcefghjk	4ci	none	7	10		9	12	21	9	11
IIx	7bcefghjk	4cii	none	37	41		68	64	53	58	58
IIx	7bcefghjk	4ciii	none	27	35		33	30	20	26	27
IIx	7bcefghjk	4civ	none	26	25		32	45	41	51	61
IIx	7bcefghjk	4d	none	21	19		13	17	21	29	40
IIx	7bcefghjk	4e	none	24	27		30	38	41	48	48
IIx	7bcefghjk	none	none	229	222		185	191	204	252	274

The mean proportion of total effort over the years 2003-2007 (in order to exclude years with no Irish disaggregated data) of each gear category (Figure 9.2.2.2) shows that bottom trawls (and Danish seine) are dominant. Two major mesh-size categories of these gears: 4aiv (100-119mm) and 4aii (70-89mm) contribute 36 and 27% respectively. Beam trawlers with 80-89mm mesh size (4bi) contribute to 19% on average to the reported fishing effort in 2003-2007.

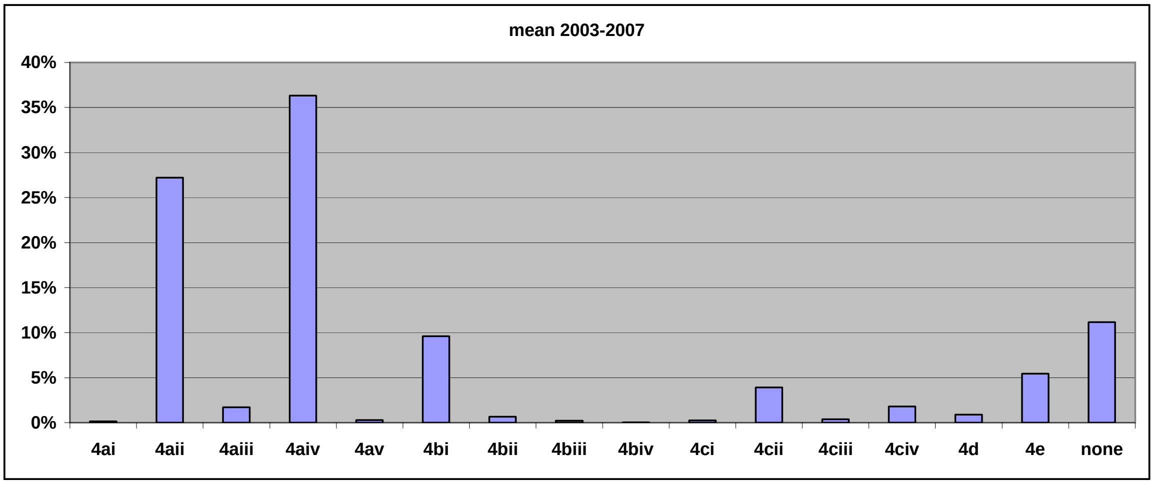


Figure 9.2.2.2. Contribution of each gear category to the total effort (kWdays) in the Celtic Sea (ICES Divisions VIIbc,e-k). Mean over 2003-2007.

The 'none' category means either that no information is available to allocate the effort data to a regulated gear in a mesh-size category or that there is no proposal to regulate that category of gear. This category accounts for around 23% in 2000-2002, when disaggregated Irish data are not available; this proportion fell to 11% since then (Figure 9.2.2.3).

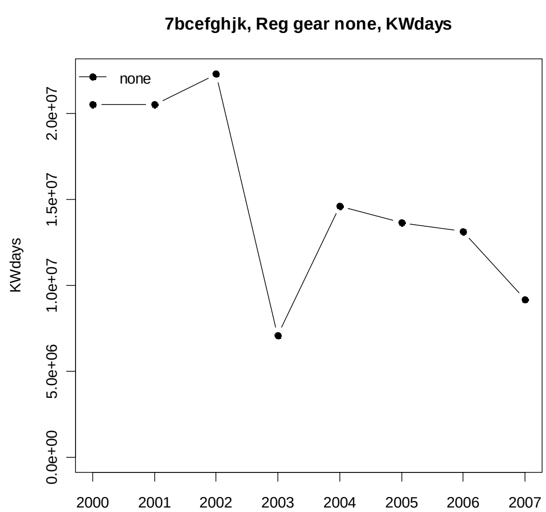


Fig. 9.2.2.3. Trend in nominal effort for gear-category 'none' in the Celtic Sea, 2000-2007.

Figures 9.2.2.4 to 9.2.2.9 show the recent trends in nominal effort for the various gear categories and mesh size in the Celtic Sea. Tables 9.2.2.1 to 9.2.2.3 provide details.

As the Spanish data are only available since 2002 and the rather large amount of 'none category' effort for some countries or some years, it is difficult to make any comments on the effort trends for any particular gear-category over the whole period 2000-2007, and comparison could only be made over the period 2003-2007.

Total effort as shown in Figure 9.2.2.4 shows an artificial increase between 2000 and 2002 due to the inclusion of the Spanish data since 2002. Total effort has been decreasing since 2002 (a reduction of 13% between 2002 and 2007). Most of the decrease in effort occurred in 2006.

Uncertainties in the numbers of vessels provided by Spain means these data have not been considered. Therefore the graphs showing the trend in number of vessels refer to all countries except Spain. Figure 9.2.2.5 shows a continuous increase in the sum of the maximum number of vessels over the period (an increase of 62% from 2000 to 2007). Since a vessel is counted every time it uses a particular gear category, the sum may not reflect the total amount of vessels involved in this area, but a possible change between gear, or gear-category, within the year. It is not possible to check for a possible increase in the total number of vessels operating in the area.

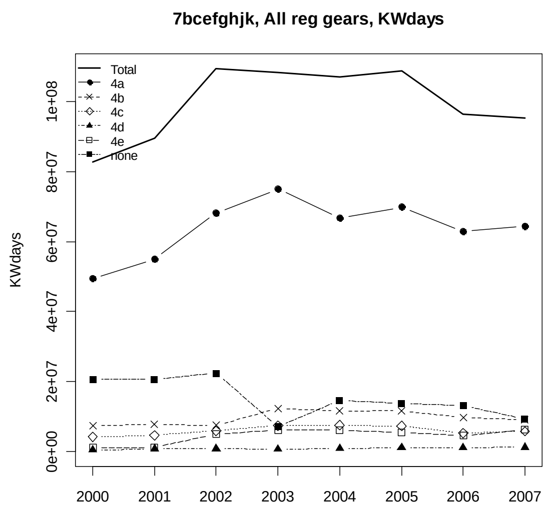
Figures 9.2.2.6 and 9.2.2.7 show the fishing effort for the bottom trawl (and Danish seine) for each mesh size category and the maximum number of vessels using (at least once) each gear category. As for the total, the fishing effort of these gears (in kW*days or in GT*days) shows a decrease in recent years, while the maximum number of vessels increases, especially for mesh-size category aii (70-89mm). Figures 9.2.2.8 and 9.2.2.9 give the same information for the beam trawls.

The relative trends were compared for effort measured in kW*days, GT*days and number of vessels (Figure 9.2.2.10.). kW*days and GT*days often show very similar patterns, although this does not apply to all categories with low levels of effort. In most cases, however, the number of vessels is not well correlated to the two other measures, and the patterns observed cannot be easily interpreted. This is consistent with the remark above underlying that number of vessels, using the method of estimation here, may not be an adequate measure of effort.

Spanish data available since 2002 but for 7e-k only

Irish data not disaggregated in

Trends by category should be looked at



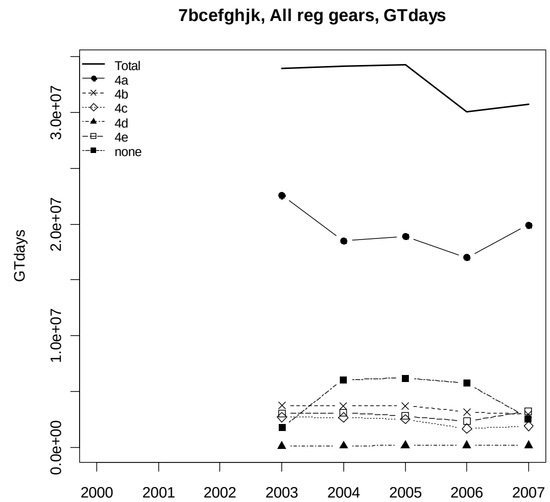
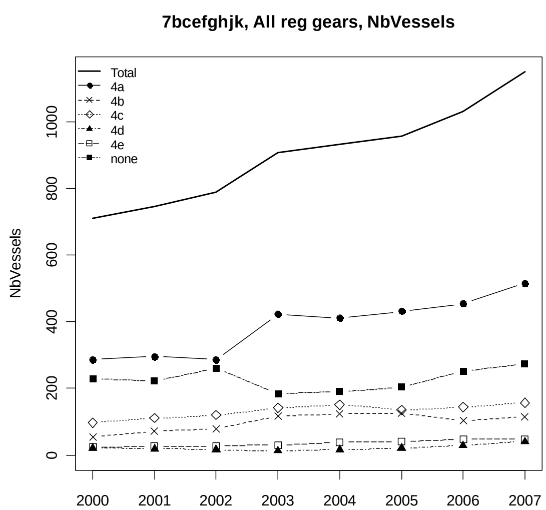


Fig. 9.2.2.4. Trend in nominal effort by gear types in the Celtic Sea (ICES Divisions VIIbc,e-k), 2000-2007. Left: kW*days, right: GT*days. 4a = demersal trawl, 4b = Beam trawl, 4c = Gillnet, 4d = Trammel net, 4e = Longline.



Irish data not disaggregated in
Trends by category should be looked at 2003

Fig. 9.2.2.5 Trend in maximum number of vessels by gear types in the Celtic Sea, 2000-2007, without Spain.

Spanish data available since 2002 but for 7e-k only

Irish data not disaggregated in

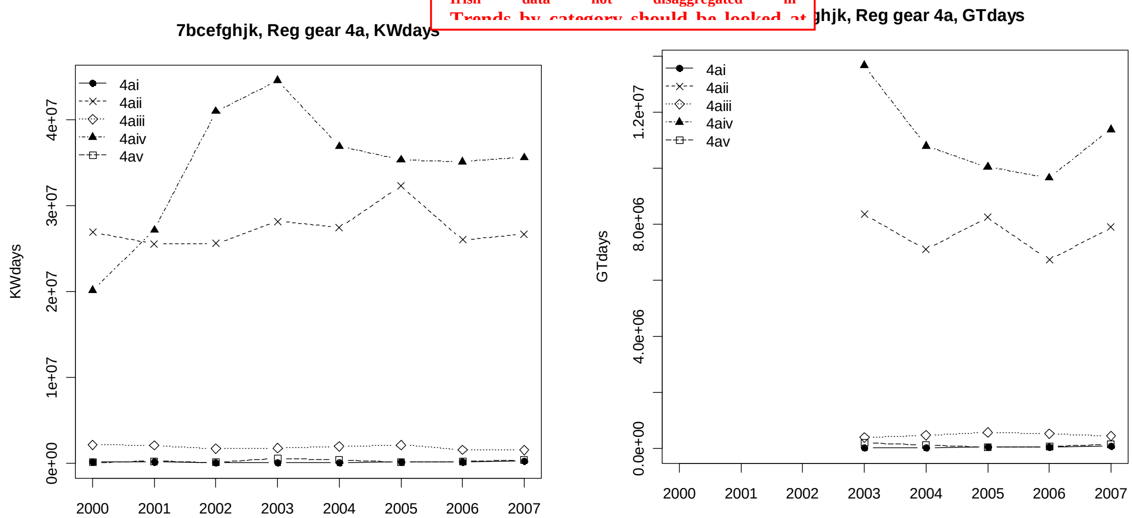
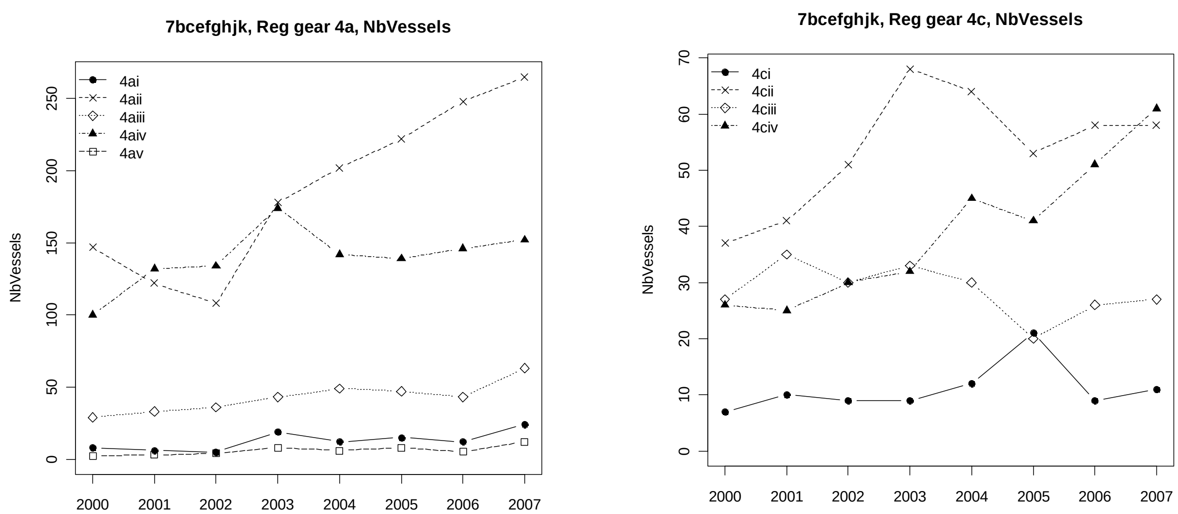


Fig. 9.2.2.6. Trend in nominal effort for demersal trawl by mesh size range in the Celtic Sea (ICES Divisions VIIbc,e-k), 2000-2007. Left: kW*days, right: GT*days. 4ai=16-31 mm, 4aii=70-89 mm, 4aiii = 90-99 mm, 4aiv = 100-119 mm, 4av = 120+ mm.



Irish data not disaggregated in
Trends by category should be looked at 2003

Fig. 9.2.2.7. Trend in maximum number of vessels by mesh size range in the Celtic Sea, 2000-2007, without Spain. Left: demersal trawl, right: gillnet.

Spanish data available since 2002 but for 7e-k only

Irish data not disaggregated in
Trends by category should be looked at

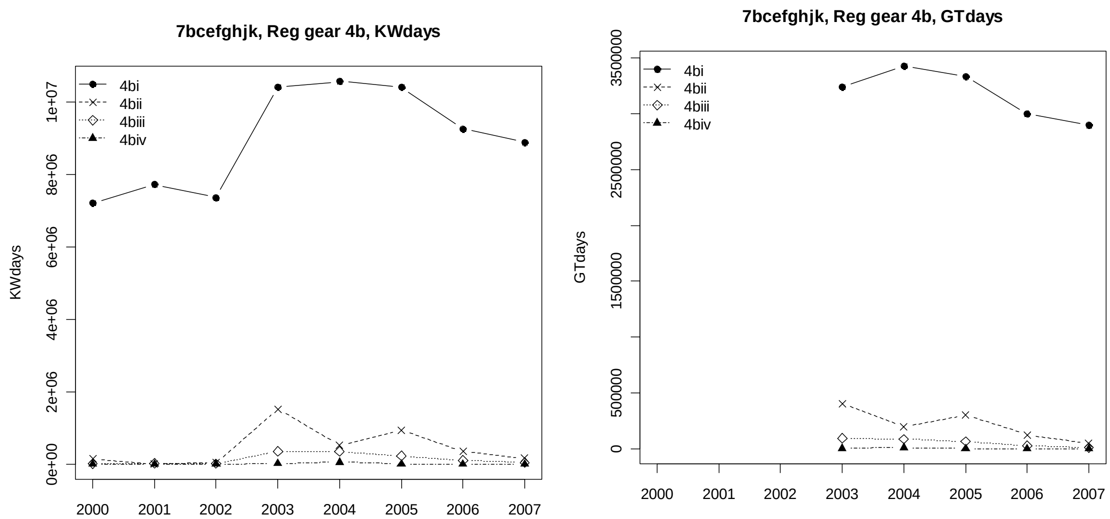
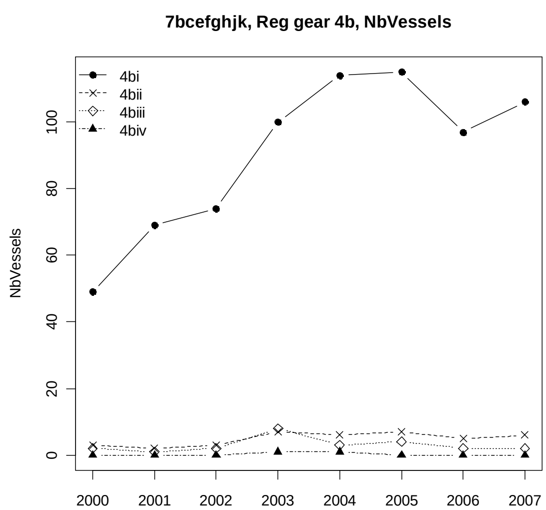
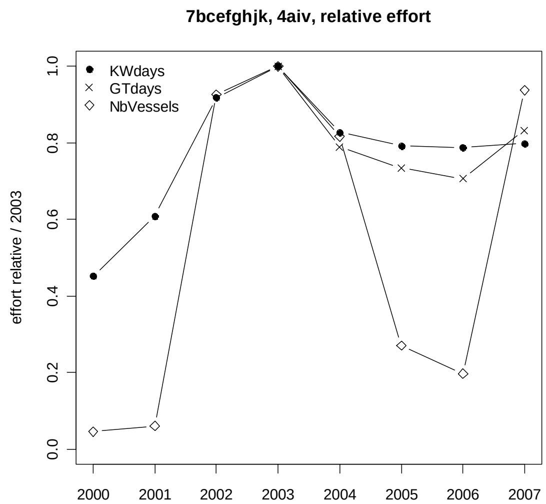


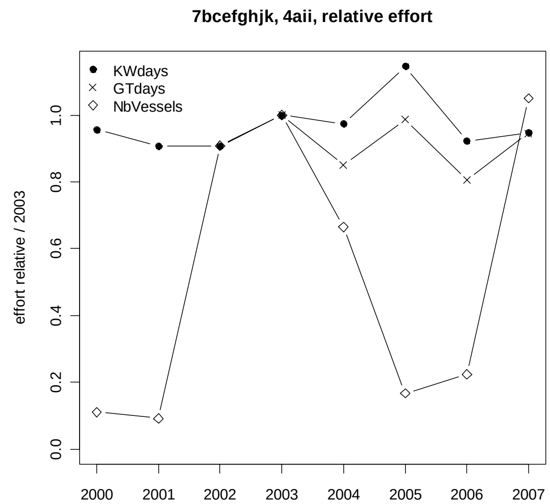
Fig. 9.2.2.8. Trend in nominal effort for beam trawl by mesh size range in the Celtic Sea (ICES Divisions VIIbc,e-k), 2000-2007. Left: kW*days, right: GT*days. 4ai=16-31 mm, 4aii=70-89 mm, 4aiii = 90-99 mm, 4aiv = 100-119 mm, 4av = 120+ mm.

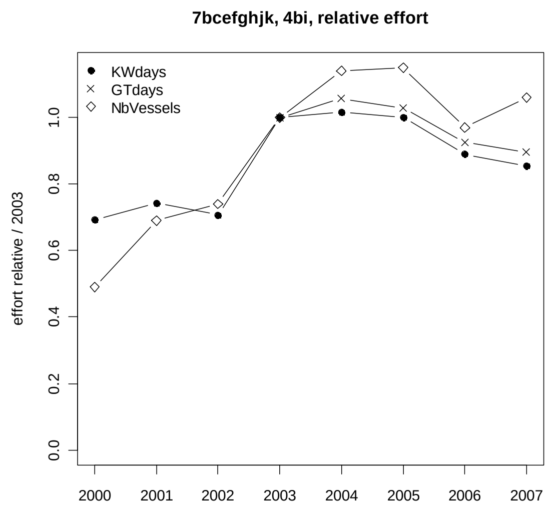


Irish data not disaggregated in
Trends by category should be looked at
2003

Fig. 9.2.2.9. Trend in maximum number of vessels for beam trawl by mesh size range in the Celtic Sea, 2000-2007, without Spain.







Spanish data available since 2002 but for 7e-k only

Irish data not disaggregated in
Trends by category should be looked at

Fig. 9.2.2.10. Trend in relative effort expressed in KW*days, GT*days and number of vessels for the main demersal trawl categories in the Celtic Sea. Effort is measured relative to its value in 2003.

9.2.3. VIIfg – part of Celtic Sea

Contributions by different countries to overall effort in the smaller area, VIIfg are shown in (Figure 9.2.3.1). Vessels from Belgium, France, Ireland and UK(E-W) operate in the Divisions VIIfg. In terms of kW*days, France contributes 56%, Ireland 26%, England 9% and Belgium 8% (average 2002-2007). Spain accounts for the small amount of remaining effort.

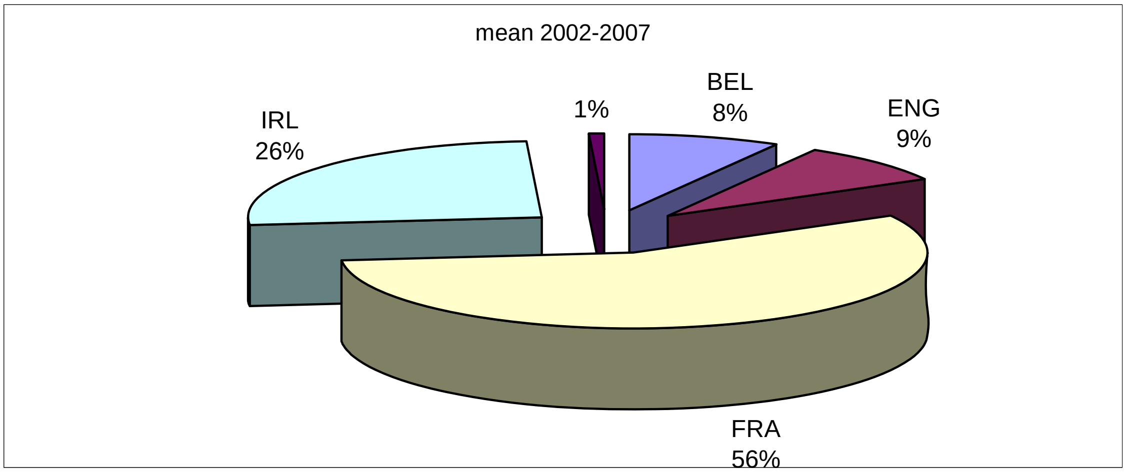


Figure 9.2.3.1. Contribution of each country to the total effort in the Divisions VIIfg (mean 2002-2007).

Effort combined across countries and summarised for different gear categories are given in Tables 9.2.3.1 – 9.2.3.3

Table 9.2.3.1 Trend in effort (kW*days at sea) by gear and mesh-size category in the ICES Divisions VIIfg, 2000-2007.

ANNEX	REG AREA COMB	REG GEAR	SPECON	2000	2001	2002	2003	2004	2005	2006	2007
IIy	7fg	4ai	none	53211	14191			24745	3292	16626	11918
IIy	7fg	4aii	none	4536454	3290307	1947905	3777878	3339627	5028942	3544181	3618723
IIy	7fg	4aiii	none	137521	101415	34621	233720	307437	256317	176550	210673
IIy	7fg	4aiv	none	10981065	13998444	17378862	16422719	13762163	12787339	12453425	11206780
IIy	7fg	4av	none		47971	18816	36219	20009		658	8186
IIy	7fg	4bi	none	3133744	3221905	2594470	4723468	4823754	4458138	3937661	3668548
IIy	7fg	4bii	none	17809	534	9830	1089168	461206	812834	257449	81662
IIy	7fg	4biii	none		468	5304	233446	269596	191144	99040	26230
IIy	7fg	4biv	none				9699	8787			
IIy	7fg	4ci	none	22103	9448	28373	42335	75234	287152	67152	44158
IIy	7fg	4cii	none	340758	227425	408292	551531	568291	450757	383176	394580
IIy	7fg	4ciii	none	63766	36246	29550	91436	122772	62491	74912	97327
IIy	7fg	4civ	none	77489	254884	68210	69170	176003	115251	129826	107875
IIy	7fg	4d	none	55	2092	2616	14054	26801	30014	125558	95428
IIy	7fg	4e	none	81132	83804	68130	33861	39148	62080	34962	24091
IIy	7fg	none	none	6050716	6533086	6450227	1141362	2064772	960667	889586	973697

Table 9.2.3.2 Trend in effort (GT*days at sea) by gear and mesh-size category in the ICES Divisions VIIfg, 2003-2007.

ANNEX	REG AREA COMB	REG GEAR	SPECON	2000	2001	2002	2003	2004	2005	2006	2007
IIy	7fg	4ai	none					10695	1304	7177	4109
IIy	7fg	4aii	none				1078273	983683	1557629	1103135	1151155
IIy	7fg	4aiii	none				79459	101883	84984	56177	68762
IIy	7fg	4aiv	none				3794496	3169837	3057853	2862188	2774149
IIy	7fg	4av	none				14057	4970		228	3442
IIy	7fg	4bi	none				1647380	1773392	1608491	1456994	1361864
IIy	7fg	4bii	none				279138	163720	257484	93687	25846
IIy	7fg	4biii	none				66257	66509	53704	24102	6899
IIy	7fg	4biv	none				2273	1344			
IIy	7fg	4ci	none				11013	5718	89021	8858	3354
IIy	7fg	4cii	none				148339	183365	158618	128133	139114
IIy	7fg	4ciii	none				28251	41667	17050	18556	34655
IIy	7fg	4civ	none				15486	53512	39060	39366	28698
IIy	7fg	4d	none				2470	9383	7187	31108	22567
IIy	7fg	4e	none				11107	19923	31717	19130	12759
IIy	7fg	none	none				253459	644155	271691	317301	294077

Table 9.2.3.3 Trend in nominal effort (maximum numbers of vessels over national fisheries and quarters) by gear and mesh-size category in the ICES Divisions VIIfg, 2000-2007. Note that Spanish information is not included.

ANNEX	REG AREA COMB	REG GEAR	SPECON	2000	2001	2002	2003	2004	2005	2006	2007
IIy	7fg	4ai	none	2	2			5	3	4	3
IIy	7fg	4aii	none	78	46		86	85	103	89	105
IIy	7fg	4aiii	none	7	4		14	11	11	11	14
IIy	7fg	4aiv	none	93	106		120	116	98	108	116
IIy	7fg	4av	none		2		2	3		1	2
IIy	7fg	4bi	none	41	51		90	93	96	77	86
IIy	7fg	4bii	none	2	1		7	5	6	4	4
IIy	7fg	4biii	none		1		7	2	3	2	2
IIy	7fg	4biv	none				1	1			
IIy	7fg	4ci	none	3	3		5	5	17	5	4
IIy	7fg	4cii	none	19	20		31	35	32	28	26
IIy	7fg	4ciii	none	11	8		11	12	7	11	17
IIy	7fg	4civ	none	6	8		8	12	11	14	18
IIy	7fg	4d	none	1	2		3	4	5	6	5
IIy	7fg	4e	none	7	7		4	2	7	5	7
IIy	7fg	none	none	95	103		39	41	46	42	43

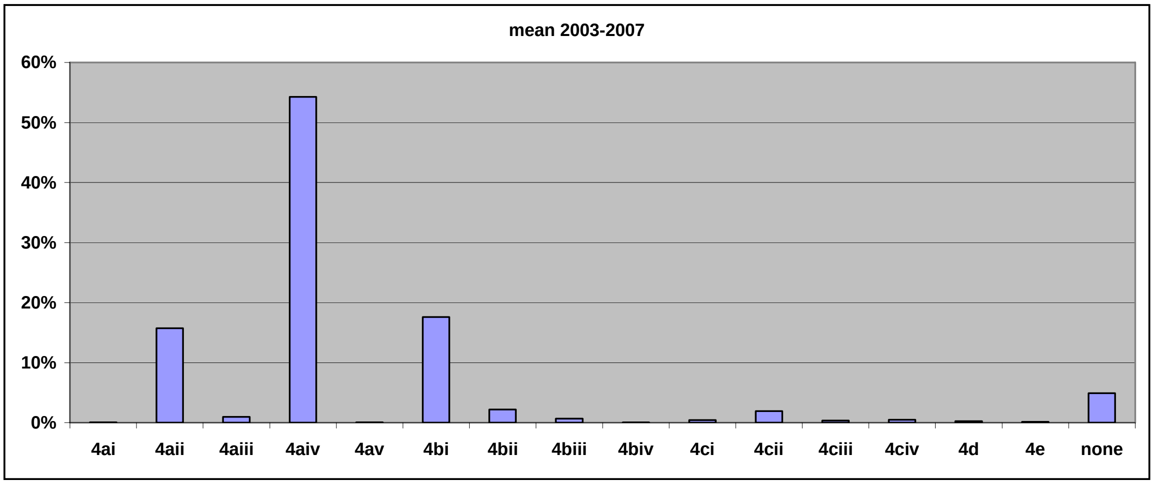
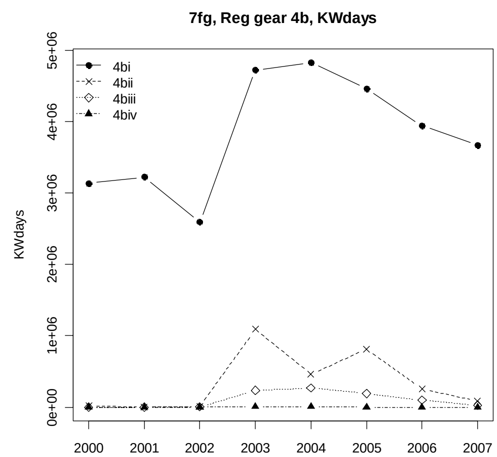
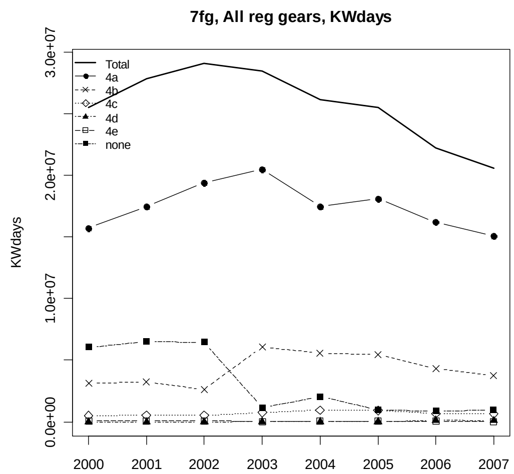


Figure 9.2.3.2. Contribution of each gear category to the total effort (kW*days) in the ICES Divisions VIIfg. Mean over 2003-2007.

The mean proportion of total effort over the period 2003-2007 (to exclude years with no Irish disaggregated data) of each gear category (Figure 9.2.3.2) shows that the fishery in this area is dominated (54%) by the bottom trawls (and Danish seine) using mesh-size category 4aiv (100-119mm). Bottom trawls using mesh-size category 4aii (70-89mm) and beam trawlers with 80-89mm mesh size (4bi) contribute a further 16 and 18% respectively.





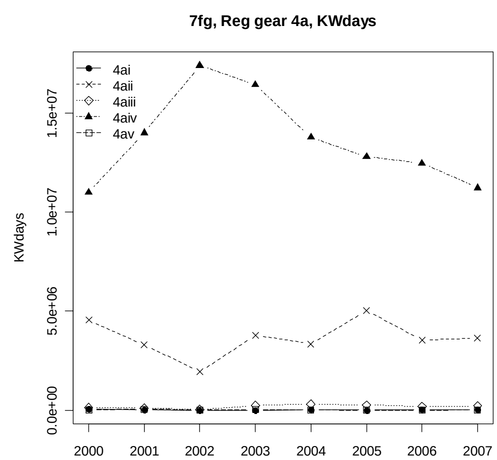


Fig. 9.2.3.3. Trend in nominal effort in kW*days by gear type in the ICES Divisions VIIfg, 2000-2007. 4a = demersal trawl, 4b = Beam trawl.

The total effort in area VIIfg has decreased by 29% since 2002. This decrease is mostly due to bottom trawls using 100-119mm mesh size (a reduction of 36%).

9.2.4. Comparison between the two different area designations

The contributions to the total effort of the Celtic Sea as a whole (ICES Divisions VIIbc,e-k) and for the restricted area VIIfg differ depending of the country. Spain contributes 11% to the total Celtic Sea area and none to the area VIIfg. England contributes less to the total in VIIfg (9%) than to the total Celtic Sea (14%). This is the opposite for Ireland which contributes 26% to the total in VIIfg but 14% in the whole Celtic Sea, and to a lesser extent Belgium (8% and 2% respectively). The contribution of France in both area is around 55%.

The contribution of the bottom trawls using 100-119 mm mesh size is higher in the Divisions VIIfg than for the Celtic Sea as a whole. Nets and longlines are not used significantly in this area.

9.3. Catch estimates in the Celtic Sea area

9.3.1. Introduction

As already indicated in the general section, only landings data are considered. However it should be kept in mind that discards for some species have been reported to ICES and appear to be rather high. This is particularly the case for cod in recent years because of high-grading practices as a response to prevent quota overshot.

Given the absence of full and reliable discards and scarce ageing information available, the Group considers that catch at age information should not be presented until it has been completed by all countries/years/gears. Table 9.3.1.1a-i presents the landings by species and category for 2003-2007.

Table 9.3.1.1a. Landings of anglerfish by category. Left: Celtic Sea, Right : Divisions VIIfg

7bcefghjk

REG_AREA	SPECIES	YEAR	REG_GEAR	SPECON	LANDINGS
7bcefghjk	ANF	2003	4ai	none	2
7bcefghjk	ANF	2003	4aii	none	5296
7bcefghjk	ANF	2003	4aiii	none	279
7bcefghjk	ANF	2003	4aiv	none	7800
7bcefghjk	ANF	2003	4av	none	14
7bcefghjk	ANF	2003	4bi	none	2259
7bcefghjk	ANF	2003	4bii	none	76
7bcefghjk	ANF	2003	4biii	none	18
7bcefghjk	ANF	2003	4biv	none	1
7bcefghjk	ANF	2003	4ci	none	28
7bcefghjk	ANF	2003	4cii	none	293
7bcefghjk	ANF	2003	4ciii	none	177
7bcefghjk	ANF	2003	4civ	none	1271
7bcefghjk	ANF	2003	4d	none	734
7bcefghjk	ANF	2003	4e	none	12
7bcefghjk	ANF	2003	none	none	1591
7bcefghjk	ANF	2004	4aii	none	4823
7bcefghjk	ANF	2004	4aiii	none	277
7bcefghjk	ANF	2004	4aiv	none	7513
7bcefghjk	ANF	2004	4av	none	37
7bcefghjk	ANF	2004	4bi	none	2833
7bcefghjk	ANF	2004	4bii	none	47
7bcefghjk	ANF	2004	4biii	none	35
7bcefghjk	ANF	2004	4biv	none	11
7bcefghjk	ANF	2004	4ci	none	27
7bcefghjk	ANF	2004	4cii	none	463
7bcefghjk	ANF	2004	4ciii	none	200
7bcefghjk	ANF	2004	4civ	none	1621
7bcefghjk	ANF	2004	4d	none	1149
7bcefghjk	ANF	2004	4e	none	10
7bcefghjk	ANF	2004	none	none	1771
7bcefghjk	ANF	2005	4aii	none	4913
7bcefghjk	ANF	2005	4aiii	none	302
7bcefghjk	ANF	2005	4aiv	none	6585
7bcefghjk	ANF	2005	4av	none	6
7bcefghjk	ANF	2005	4bi	none	2725
7bcefghjk	ANF	2005	4bii	none	123
7bcefghjk	ANF	2005	4biii	none	28
7bcefghjk	ANF	2005	4ci	none	74
7bcefghjk	ANF	2005	4cii	none	372
7bcefghjk	ANF	2005	4ciii	none	96
7bcefghjk	ANF	2005	4civ	none	2271
7bcefghjk	ANF	2005	4d	none	1358
7bcefghjk	ANF	2005	4e	none	31
7bcefghjk	ANF	2005	none	none	1758
7bcefghjk	ANF	2006	4ai	none	7
7bcefghjk	ANF	2006	4aii	none	4298
7bcefghjk	ANF	2006	4aiii	none	314
7bcefghjk	ANF	2006	4aiv	none	7937
7bcefghjk	ANF	2006	4av	none	44
7bcefghjk	ANF	2006	4bi	none	2862
7bcefghjk	ANF	2006	4bii	none	72
7bcefghjk	ANF	2006	4biii	none	15
7bcefghjk	ANF	2006	4ci	none	15
7bcefghjk	ANF	2006	4cii	none	241
7bcefghjk	ANF	2006	4ciii	none	69
7bcefghjk	ANF	2006	4civ	none	1219
7bcefghjk	ANF	2006	4d	none	1061
7bcefghjk	ANF	2006	4e	none	2
7bcefghjk	ANF	2006	none	none	2332
7bcefghjk	ANF	2007	4ai	none	1
7bcefghjk	ANF	2007	4aii	none	4758
7bcefghjk	ANF	2007	4aiii	none	455
7bcefghjk	ANF	2007	4aiv	none	8934
7bcefghjk	ANF	2007	4av	none	81
7bcefghjk	ANF	2007	4bi	none	3192
7bcefghjk	ANF	2007	4bii	none	43
7bcefghjk	ANF	2007	4biii	none	8
7bcefghjk	ANF	2007	4ci	none	4
7bcefghjk	ANF	2007	4cii	none	183
7bcefghjk	ANF	2007	4ciii	none	9
7bcefghjk	ANF	2007	4civ	none	2210
7bcefghjk	ANF	2007	4d	none	1227

7fg

REG_AREA	SPECIES	YEAR	REG_GEAR	SPECON	LANDINGS
7fg	ANF	2003	4aii	none	374
7fg	ANF	2003	4aiii	none	27
7fg	ANF	2003	4aiv	none	2044
7fg	ANF	2003	4av	none	1
7fg	ANF	2003	4bi	none	1118
7fg	ANF	2003	4bii	none	49
7fg	ANF	2003	4biii	none	14
7fg	ANF	2003	4biv	none	1
7fg	ANF	2003	4ci	none	7
7fg	ANF	2003	4cii	none	11
7fg	ANF	2003	4ciii	none	15
7fg	ANF	2003	4civ	none	32
7fg	ANF	2003	4d	none	9
7fg	ANF	2003	none	none	52
7fg	ANF	2004	4aii	none	378
7fg	ANF	2004	4aiii	none	52
7fg	ANF	2004	4aiv	none	1812
7fg	ANF	2004	4av	none	2
7fg	ANF	2004	4bi	none	1271
7fg	ANF	2004	4bii	none	42
7fg	ANF	2004	4biii	none	21
7fg	ANF	2004	4biv	none	1
7fg	ANF	2004	4ci	none	3
7fg	ANF	2004	4cii	none	20
7fg	ANF	2004	4ciii	none	27
7fg	ANF	2004	4civ	none	117
7fg	ANF	2004	4d	none	8
7fg	ANF	2004	none	none	139
7fg	ANF	2005	4aii	none	430
7fg	ANF	2005	4aiii	none	57
7fg	ANF	2005	4aiv	none	1306
7fg	ANF	2005	4bi	none	1046
7fg	ANF	2005	4bii	none	100
7fg	ANF	2005	4biii	none	19
7fg	ANF	2005	4ci	none	31
7fg	ANF	2005	4cii	none	17
7fg	ANF	2005	4ciii	none	16
7fg	ANF	2005	4civ	none	77
7fg	ANF	2005	4d	none	18
7fg	ANF	2005	none	none	40
7fg	ANF	2006	4aii	none	407
7fg	ANF	2006	4aiii	none	39
7fg	ANF	2006	4aiv	none	1465
7fg	ANF	2006	4bi	none	1141
7fg	ANF	2006	4bii	none	51
7fg	ANF	2006	4biii	none	14
7fg	ANF	2006	4ci	none	7
7fg	ANF	2006	4cii	none	13
7fg	ANF	2006	4ciii	none	5
7fg	ANF	2006	4civ	none	64
7fg	ANF	2006	4d	none	50
7fg	ANF	2006	none	none	87
7fg	ANF	2007	4aii	none	532
7fg	ANF	2007	4aiii	none	53
7fg	ANF	2007	4aiv	none	1627
7fg	ANF	2007	4bi	none	1131
7fg	ANF	2007	4bii	none	22
7fg	ANF	2007	4biii	none	4
7fg	ANF	2007	4cii	none	5
7fg	ANF	2007	4ciii	none	4
7fg	ANF	2007	4civ	none	48
7fg	ANF	2007	4d	none	27
7fg	ANF	2007	none	none	82

Table 9.3.1.1b. Landings of cod by category. Left: Celtic Sea, Right : Divisions VIIfg

7bcefghjk

REG_AREA	SPECIES	YEAR	REG_GEAR	SPECON	LANDINGS
7bcefghjk	COD	2003	4aii	none	998
7bcefghjk	COD	2003	4aiii	none	70
7bcefghjk	COD	2003	4aiv	none	4553
7bcefghjk	COD	2003	4av	none	4
7bcefghjk	COD	2003	4bi	none	280
7bcefghjk	COD	2003	4bii	none	20
7bcefghjk	COD	2003	4biii	none	6
7bcefghjk	COD	2003	4ci	none	6
7bcefghjk	COD	2003	4cii	none	31
7bcefghjk	COD	2003	4ciii	none	10
7bcefghjk	COD	2003	4civ	none	6
7bcefghjk	COD	2003	4d	none	12
7bcefghjk	COD	2003	4e	none	19
7bcefghjk	COD	2003	none	none	51
7bcefghjk	COD	2004	4aii	none	532
7bcefghjk	COD	2004	4aiii	none	39
7bcefghjk	COD	2004	4aiv	none	2241
7bcefghjk	COD	2004	4av	none	5
7bcefghjk	COD	2004	4bi	none	295
7bcefghjk	COD	2004	4bii	none	24
7bcefghjk	COD	2004	4biii	none	11
7bcefghjk	COD	2004	4biv	none	1
7bcefghjk	COD	2004	4ci	none	1
7bcefghjk	COD	2004	4cii	none	44
7bcefghjk	COD	2004	4ciii	none	30
7bcefghjk	COD	2004	4civ	none	10
7bcefghjk	COD	2004	4d	none	9
7bcefghjk	COD	2004	4e	none	6
7bcefghjk	COD	2004	none	none	102
7bcefghjk	COD	2005	4aii	none	743
7bcefghjk	COD	2005	4aiii	none	39
7bcefghjk	COD	2005	4aiv	none	1457
7bcefghjk	COD	2005	4bi	none	394
7bcefghjk	COD	2005	4bii	none	46
7bcefghjk	COD	2005	4biii	none	11
7bcefghjk	COD	2005	4ci	none	73
7bcefghjk	COD	2005	4cii	none	50
7bcefghjk	COD	2005	4ciii	none	9
7bcefghjk	COD	2005	4civ	none	6
7bcefghjk	COD	2005	4d	none	12
7bcefghjk	COD	2005	4e	none	4
7bcefghjk	COD	2005	none	none	9
7bcefghjk	COD	2006	4aii	none	821
7bcefghjk	COD	2006	4aiii	none	29
7bcefghjk	COD	2006	4aiv	none	1690
7bcefghjk	COD	2006	4av	none	1
7bcefghjk	COD	2006	4bi	none	324
7bcefghjk	COD	2006	4bii	none	22
7bcefghjk	COD	2006	4biii	none	7
7bcefghjk	COD	2006	4ci	none	2
7bcefghjk	COD	2006	4cii	none	61
7bcefghjk	COD	2006	4ciii	none	49
7bcefghjk	COD	2006	4civ	none	9
7bcefghjk	COD	2006	4d	none	9
7bcefghjk	COD	2006	4e	none	20
7bcefghjk	COD	2006	none	none	14
7bcefghjk	COD	2007	4aii	none	823
7bcefghjk	COD	2007	4aiii	none	33
7bcefghjk	COD	2007	4aiv	none	2168
7bcefghjk	COD	2007	4av	none	2
7bcefghjk	COD	2007	4bi	none	316
7bcefghjk	COD	2007	4bii	none	6
7bcefghjk	COD	2007	4biii	none	2
7bcefghjk	COD	2007	4ci	none	2
7bcefghjk	COD	2007	4cii	none	64
7bcefghjk	COD	2007	4ciii	none	78
7bcefghjk	COD	2007	4civ	none	15
7bcefghjk	COD	2007	4d	none	9
7bcefghjk	COD	2007	4e	none	3
7bcefghjk	COD	2007	none	none	17

7fg

REG_AREA	SPECIES	YEAR	REG_GEAR	SPECON	LANDINGS
7fg	COD	2003	4aii	none	361
7fg	COD	2003	4aiii	none	16
7fg	COD	2003	4aiv	none	3602
7fg	COD	2003	4av	none	3
7fg	COD	2003	4bi	none	207
7fg	COD	2003	4bii	none	14
7fg	COD	2003	4biii	none	5
7fg	COD	2003	4ci	none	4
7fg	COD	2003	4cii	none	7
7fg	COD	2003	4ciii	none	7
7fg	COD	2003	4civ	none	2
7fg	COD	2003	4d	none	1
7fg	COD	2003	4e	none	1
7fg	COD	2003	none	none	27
7fg	COD	2004	4aii	none	269
7fg	COD	2004	4aiii	none	20
7fg	COD	2004	4aiv	none	1749
7fg	COD	2004	4av	none	3
7fg	COD	2004	4bi	none	223
7fg	COD	2004	4bii	none	21
7fg	COD	2004	4biii	none	8
7fg	COD	2004	4cii	none	31
7fg	COD	2004	4ciii	none	19
7fg	COD	2004	4civ	none	5
7fg	COD	2004	none	none	86
7fg	COD	2005	4aii	none	414
7fg	COD	2005	4aiii	none	21
7fg	COD	2005	4aiv	none	1110
7fg	COD	2005	4bi	none	297
7fg	COD	2005	4bii	none	41
7fg	COD	2005	4biii	none	11
7fg	COD	2005	4ci	none	68
7fg	COD	2005	4cii	none	27
7fg	COD	2005	4ciii	none	3
7fg	COD	2005	4civ	none	2
7fg	COD	2005	4d	none	1
7fg	COD	2005	4e	none	3
7fg	COD	2005	none	none	6
7fg	COD	2006	4aii	none	434
7fg	COD	2006	4aiii	none	19
7fg	COD	2006	4aiv	none	1278
7fg	COD	2006	4bi	none	245
7fg	COD	2006	4bii	none	19
7fg	COD	2006	4biii	none	7
7fg	COD	2006	4ci	none	2
7fg	COD	2006	4cii	none	28
7fg	COD	2006	4ciii	none	44
7fg	COD	2006	4civ	none	4
7fg	COD	2006	4d	none	3
7fg	COD	2006	4e	none	2
7fg	COD	2006	none	none	10
7fg	COD	2007	4aii	none	333
7fg	COD	2007	4aiii	none	17
7fg	COD	2007	4aiv	none	1676
7fg	COD	2007	4bi	none	219
7fg	COD	2007	4bii	none	5
7fg	COD	2007	4biii	none	2
7fg	COD	2007	4ci	none	1
7fg	COD	2007	4cii	none	14
7fg	COD	2007	4ciii	none	66
7fg	COD	2007	4civ	none	10
7fg	COD	2007	4d	none	1
7fg	COD	2007	none	none	15

Table 9.3.1.1c. Landings of haddock by category. Left: Celtic Sea, Right : Divisions VIIfg

7bcefghjk

REG_AREA	SPECIES	YEAR	REG_GEAR	SPECON	LANDINGS
7bcefghjk	HAD	2003	4ai	none	3
7bcefghjk	HAD	2003	4aii	none	1693
7bcefghjk	HAD	2003	4aiii	none	123
7bcefghjk	HAD	2003	4aiv	none	5601
7bcefghjk	HAD	2003	4av	none	8
7bcefghjk	HAD	2003	4bi	none	321
7bcefghjk	HAD	2003	4bii	none	37
7bcefghjk	HAD	2003	4biii	none	11
7bcefghjk	HAD	2003	4ci	none	24
7bcefghjk	HAD	2003	4cii	none	87
7bcefghjk	HAD	2003	4ciii	none	13
7bcefghjk	HAD	2003	4e	none	16
7bcefghjk	HAD	2003	none	none	120
7bcefghjk	HAD	2004	4ai	none	1
7bcefghjk	HAD	2004	4aii	none	1423
7bcefghjk	HAD	2004	4aiii	none	135
7bcefghjk	HAD	2004	4aiv	none	6011
7bcefghjk	HAD	2004	4av	none	13
7bcefghjk	HAD	2004	4bi	none	356
7bcefghjk	HAD	2004	4bii	none	34
7bcefghjk	HAD	2004	4biii	none	24
7bcefghjk	HAD	2004	4biv	none	1
7bcefghjk	HAD	2004	4cii	none	61
7bcefghjk	HAD	2004	4ciii	none	9
7bcefghjk	HAD	2004	4civ	none	1
7bcefghjk	HAD	2004	4e	none	26
7bcefghjk	HAD	2004	none	none	338
7bcefghjk	HAD	2005	4ai	none	1
7bcefghjk	HAD	2005	4aii	none	1566
7bcefghjk	HAD	2005	4aiii	none	131
7bcefghjk	HAD	2005	4aiv	none	4196
7bcefghjk	HAD	2005	4bi	none	413
7bcefghjk	HAD	2005	4bii	none	53
7bcefghjk	HAD	2005	4biii	none	17
7bcefghjk	HAD	2005	4ci	none	44
7bcefghjk	HAD	2005	4cii	none	52
7bcefghjk	HAD	2005	4ciii	none	1
7bcefghjk	HAD	2005	4e	none	42
7bcefghjk	HAD	2005	none	none	131
7bcefghjk	HAD	2006	4ai	none	3
7bcefghjk	HAD	2006	4aii	none	1316
7bcefghjk	HAD	2006	4aiii	none	111
7bcefghjk	HAD	2006	4aiv	none	3357
7bcefghjk	HAD	2006	4av	none	13
7bcefghjk	HAD	2006	4bi	none	323
7bcefghjk	HAD	2006	4bii	none	15
7bcefghjk	HAD	2006	4biii	none	7
7bcefghjk	HAD	2006	4ci	none	2
7bcefghjk	HAD	2006	4cii	none	65
7bcefghjk	HAD	2006	4ciii	none	5
7bcefghjk	HAD	2006	4civ	none	1
7bcefghjk	HAD	2006	4e	none	50
7bcefghjk	HAD	2006	none	none	153
7bcefghjk	HAD	2007	4ai	none	3
7bcefghjk	HAD	2007	4aii	none	1465
7bcefghjk	HAD	2007	4aiii	none	124
7bcefghjk	HAD	2007	4aiv	none	4296
7bcefghjk	HAD	2007	4av	none	11
7bcefghjk	HAD	2007	4bi	none	335
7bcefghjk	HAD	2007	4bii	none	7
7bcefghjk	HAD	2007	4biii	none	1
7bcefghjk	HAD	2007	4ci	none	2
7bcefghjk	HAD	2007	4cii	none	68
7bcefghjk	HAD	2007	4ciii	none	35
7bcefghjk	HAD	2007	4civ	none	2
7bcefghjk	HAD	2007	4d	none	1
7bcefghjk	HAD	2007	4e	none	15
7bcefghjk	HAD	2007	none	none	198

7fg

REG_AREA	SPECIES	YEAR	REG_GEAR	SPECON	LANDINGS
7fg	HAD	2003	4aii	none	515
7fg	HAD	2003	4aiii	none	47
7fg	HAD	2003	4aiv	none	3426
7fg	HAD	2003	4av	none	4
7fg	HAD	2003	4bi	none	235
7fg	HAD	2003	4bii	none	25
7fg	HAD	2003	4biii	none	8
7fg	HAD	2003	4ci	none	4
7fg	HAD	2003	4cii	none	2
7fg	HAD	2003	4ciii	none	11
7fg	HAD	2003	none	none	35
7fg	HAD	2004	4aii	none	638
7fg	HAD	2004	4aiii	none	68
7fg	HAD	2004	4aiv	none	4306
7fg	HAD	2004	4av	none	6
7fg	HAD	2004	4bi	none	280
7fg	HAD	2004	4bii	none	30
7fg	HAD	2004	4biii	none	19
7fg	HAD	2004	4cii	none	24
7fg	HAD	2004	4ciii	none	8
7fg	HAD	2004	4civ	none	1
7fg	HAD	2004	4e	none	1
7fg	HAD	2004	none	none	162
7fg	HAD	2005	4aii	none	846
7fg	HAD	2005	4aiii	none	63
7fg	HAD	2005	4aiv	none	2840
7fg	HAD	2005	4bi	none	335
7fg	HAD	2005	4bii	none	44
7fg	HAD	2005	4biii	none	16
7fg	HAD	2005	4ci	none	22
7fg	HAD	2005	4cii	none	13
7fg	HAD	2005	4e	none	1
7fg	HAD	2005	none	none	12
7fg	HAD	2006	4aii	none	651
7fg	HAD	2006	4aiii	none	66
7fg	HAD	2006	4aiv	none	2044
7fg	HAD	2006	4bi	none	280
7fg	HAD	2006	4bii	none	12
7fg	HAD	2006	4biii	none	6
7fg	HAD	2006	4ci	none	1
7fg	HAD	2006	4cii	none	6
7fg	HAD	2006	4ciii	none	5
7fg	HAD	2006	4e	none	1
7fg	HAD	2006	none	none	9
7fg	HAD	2007	4aii	none	595
7fg	HAD	2007	4aiii	none	67
7fg	HAD	2007	4aiv	none	2742
7fg	HAD	2007	4bi	none	276
7fg	HAD	2007	4bii	none	6
7fg	HAD	2007	4biii	none	1
7fg	HAD	2007	4ci	none	2
7fg	HAD	2007	4cii	none	5
7fg	HAD	2007	4ciii	none	34
7fg	HAD	2007	4civ	none	2
7fg	HAD	2007	none	none	18

Table 9.3.1.1d. Landings of hake by category. Left: Celtic Sea, Right : Divisions VIIfg

7bcefghjk

REG_AREA	SPECIES	YEAR	REG_GEAR	SPECON	LANDINGS
7bcefghjk	HKE	2003	4aii	none	655
7bcefghjk	HKE	2003	4aiii	none	37
7bcefghjk	HKE	2003	4aiv	none	1985
7bcefghjk	HKE	2003	4av	none	26
7bcefghjk	HKE	2003	4bi	none	75
7bcefghjk	HKE	2003	4bii	none	30
7bcefghjk	HKE	2003	4biii	none	6
7bcefghjk	HKE	2003	4ci	none	206
7bcefghjk	HKE	2003	4cii	none	3603
7bcefghjk	HKE	2003	4ciii	none	18
7bcefghjk	HKE	2003	4civ	none	87
7bcefghjk	HKE	2003	4d	none	5
7bcefghjk	HKE	2003	4e	none	2110
7bcefghjk	HKE	2003	none	none	3737
7bcefghjk	HKE	2004	4aii	none	539
7bcefghjk	HKE	2004	4aiii	none	69
7bcefghjk	HKE	2004	4aiv	none	2035
7bcefghjk	HKE	2004	4av	none	6
7bcefghjk	HKE	2004	4bi	none	65
7bcefghjk	HKE	2004	4bii	none	10
7bcefghjk	HKE	2004	4biii	none	7
7bcefghjk	HKE	2004	4ci	none	10
7bcefghjk	HKE	2004	4cii	none	4755
7bcefghjk	HKE	2004	4ciii	none	25
7bcefghjk	HKE	2004	4civ	none	24
7bcefghjk	HKE	2004	4d	none	3
7bcefghjk	HKE	2004	4e	none	2425
7bcefghjk	HKE	2004	none	none	3771
7bcefghjk	HKE	2005	4aii	none	604
7bcefghjk	HKE	2005	4aiii	none	40
7bcefghjk	HKE	2005	4aiv	none	2208
7bcefghjk	HKE	2005	4av	none	1
7bcefghjk	HKE	2005	4bi	none	56
7bcefghjk	HKE	2005	4bii	none	16
7bcefghjk	HKE	2005	4biii	none	5
7bcefghjk	HKE	2005	4ci	none	291
7bcefghjk	HKE	2005	4cii	none	4345
7bcefghjk	HKE	2005	4ciii	none	4
7bcefghjk	HKE	2005	4civ	none	28
7bcefghjk	HKE	2005	4d	none	5
7bcefghjk	HKE	2005	4e	none	2386
7bcefghjk	HKE	2005	none	none	3774
7bcefghjk	HKE	2006	4aii	none	491
7bcefghjk	HKE	2006	4aiii	none	41
7bcefghjk	HKE	2006	4aiv	none	2084
7bcefghjk	HKE	2006	4av	none	3
7bcefghjk	HKE	2006	4bi	none	67
7bcefghjk	HKE	2006	4bii	none	10
7bcefghjk	HKE	2006	4biii	none	1
7bcefghjk	HKE	2006	4ci	none	35
7bcefghjk	HKE	2006	4cii	none	3722
7bcefghjk	HKE	2006	4ciii	none	10
7bcefghjk	HKE	2006	4civ	none	4
7bcefghjk	HKE	2006	4d	none	6
7bcefghjk	HKE	2006	4e	none	4436
7bcefghjk	HKE	2006	none	none	3992
7bcefghjk	HKE	2007	4aii	none	448
7bcefghjk	HKE	2007	4aiii	none	54
7bcefghjk	HKE	2007	4aiv	none	2117
7bcefghjk	HKE	2007	4av	none	8
7bcefghjk	HKE	2007	4bi	none	64
7bcefghjk	HKE	2007	4bii	none	4
7bcefghjk	HKE	2007	4biii	none	1
7bcefghjk	HKE	2007	4ci	none	18
7bcefghjk	HKE	2007	4cii	none	3917
7bcefghjk	HKE	2007	4ciii	none	23
7bcefghjk	HKE	2007	4civ	none	40
7bcefghjk	HKE	2007	4d	none	3
7bcefghjk	HKE	2007	4e	none	5376
7bcefghjk	HKE	2007	none	none	3353

7fg

REG_AREA	SPECIES	YEAR	REG_GEAR	SPECON	LANDINGS
7fg	HKE	2003	4aii	none	123
7fg	HKE	2003	4aiii	none	15
7fg	HKE	2003	4aiv	none	435
7fg	HKE	2003	4av	none	6
7fg	HKE	2003	4bi	none	52
7fg	HKE	2003	4bii	none	19
7fg	HKE	2003	4biii	none	5
7fg	HKE	2003	4ci	none	6
7fg	HKE	2003	4cii	none	30
7fg	HKE	2003	4ciii	none	10
7fg	HKE	2003	4civ	none	2
7fg	HKE	2003	4e	none	3
7fg	HKE	2003	none	none	16
7fg	HKE	2004	4aii	none	105
7fg	HKE	2004	4aiii	none	30
7fg	HKE	2004	4aiv	none	383
7fg	HKE	2004	4bi	none	41
7fg	HKE	2004	4bii	none	9
7fg	HKE	2004	4biii	none	5
7fg	HKE	2004	4cii	none	194
7fg	HKE	2004	4ciii	none	21
7fg	HKE	2004	4civ	none	4
7fg	HKE	2004	4e	none	6
7fg	HKE	2004	none	none	59
7fg	HKE	2005	4aii	none	115
7fg	HKE	2005	4aiii	none	15
7fg	HKE	2005	4aiv	none	303
7fg	HKE	2005	4bi	none	39
7fg	HKE	2005	4bii	none	13
7fg	HKE	2005	4biii	none	5
7fg	HKE	2005	4ci	none	68
7fg	HKE	2005	4cii	none	152
7fg	HKE	2005	4ciii	none	1
7fg	HKE	2005	4civ	none	1
7fg	HKE	2005	4e	none	3
7fg	HKE	2005	none	none	19
7fg	HKE	2006	4aii	none	110
7fg	HKE	2006	4aiii	none	16
7fg	HKE	2006	4aiv	none	331
7fg	HKE	2006	4bi	none	53
7fg	HKE	2006	4bii	none	7
7fg	HKE	2006	4biii	none	1
7fg	HKE	2006	4ci	none	4
7fg	HKE	2006	4cii	none	58
7fg	HKE	2006	4ciii	none	8
7fg	HKE	2006	4e	none	6
7fg	HKE	2006	none	none	26
7fg	HKE	2007	4aii	none	98
7fg	HKE	2007	4aiii	none	17
7fg	HKE	2007	4aiv	none	391
7fg	HKE	2007	4bi	none	53
7fg	HKE	2007	4bii	none	3
7fg	HKE	2007	4biii	none	1
7fg	HKE	2007	4ci	none	1
7fg	HKE	2007	4cii	none	103
7fg	HKE	2007	4ciii	none	16
7fg	HKE	2007	4civ	none	2
7fg	HKE	2007	none	none	12

Table 9.3.1.1e. Landings of Nephrops by category. Left: Celtic Sea, Right : Divisions VIIfg

7bcefghjk

REG_AREA	SPECIES	YEAR	REG_GEAR	SPECON	LANDINGS
7bcefghjk	NEP	2003	4ai	none	9
7bcefghjk	NEP	2003	4aii	none	3250
7bcefghjk	NEP	2003	4aiii	none	134
7bcefghjk	NEP	2003	4aiv	none	4260
7bcefghjk	NEP	2003	4bi	none	54
7bcefghjk	NEP	2003	4bii	none	13
7bcefghjk	NEP	2003	4biii	none	6
7bcefghjk	NEP	2003	none	none	462
7bcefghjk	NEP	2004	4aii	none	2521
7bcefghjk	NEP	2004	4aiii	none	193
7bcefghjk	NEP	2004	4aiv	none	3536
7bcefghjk	NEP	2004	4av	none	1
7bcefghjk	NEP	2004	4bi	none	66
7bcefghjk	NEP	2004	4bii	none	19
7bcefghjk	NEP	2004	4biii	none	10
7bcefghjk	NEP	2004	4ci	none	4
7bcefghjk	NEP	2004	4e	none	1
7bcefghjk	NEP	2004	none	none	963
7bcefghjk	NEP	2005	4aii	none	3847
7bcefghjk	NEP	2005	4aiii	none	192
7bcefghjk	NEP	2005	4aiv	none	3875
7bcefghjk	NEP	2005	4bi	none	64
7bcefghjk	NEP	2005	4bii	none	30
7bcefghjk	NEP	2005	4biii	none	10
7bcefghjk	NEP	2005	4ci	none	18
7bcefghjk	NEP	2005	4cii	none	2
7bcefghjk	NEP	2005	4e	none	6
7bcefghjk	NEP	2005	none	none	562
7bcefghjk	NEP	2006	4ai	none	2
7bcefghjk	NEP	2006	4aii	none	3238
7bcefghjk	NEP	2006	4aiii	none	205
7bcefghjk	NEP	2006	4aiv	none	3660
7bcefghjk	NEP	2006	4av	none	11
7bcefghjk	NEP	2006	4bi	none	84
7bcefghjk	NEP	2006	4bii	none	5
7bcefghjk	NEP	2006	4biii	none	5
7bcefghjk	NEP	2006	4ci	none	4
7bcefghjk	NEP	2006	4cii	none	1
7bcefghjk	NEP	2006	none	none	793
7bcefghjk	NEP	2007	4aii	none	4941
7bcefghjk	NEP	2007	4aiii	none	327
7bcefghjk	NEP	2007	4aiv	none	3353
7bcefghjk	NEP	2007	4av	none	19
7bcefghjk	NEP	2007	4bi	none	84
7bcefghjk	NEP	2007	4bii	none	2
7bcefghjk	NEP	2007	4e	none	3
7bcefghjk	NEP	2007	none	none	412

7fg

REG_AREA	SPECIES	YEAR	REG_GEAR	SPECON	LANDINGS
7fg	NEP	2003	4aii	none	1956
7fg	NEP	2003	4aiii	none	94
7fg	NEP	2003	4aiv	none	3134
7fg	NEP	2003	4bi	none	44
7fg	NEP	2003	4bii	none	12
7fg	NEP	2003	4biii	none	5
7fg	NEP	2003	none	none	50
7fg	NEP	2004	4aii	none	1596
7fg	NEP	2004	4aiii	none	136
7fg	NEP	2004	4aiv	none	2385
7fg	NEP	2004	4av	none	1
7fg	NEP	2004	4bi	none	54
7fg	NEP	2004	4bii	none	19
7fg	NEP	2004	4biii	none	6
7fg	NEP	2004	none	none	346
7fg	NEP	2005	4aii	none	2362
7fg	NEP	2005	4aiii	none	160
7fg	NEP	2005	4aiv	none	2301
7fg	NEP	2005	4bi	none	52
7fg	NEP	2005	4bii	none	27
7fg	NEP	2005	4biii	none	10
7fg	NEP	2005	4ci	none	10
7fg	NEP	2005	4cii	none	2
7fg	NEP	2005	none	none	11
7fg	NEP	2006	4aii	none	1789
7fg	NEP	2006	4aiii	none	89
7fg	NEP	2006	4aiv	none	2289
7fg	NEP	2006	4bi	none	80
7fg	NEP	2006	4bii	none	3
7fg	NEP	2006	4biii	none	5
7fg	NEP	2006	4ci	none	4
7fg	NEP	2006	none	none	16
7fg	NEP	2007	4aii	none	3002
7fg	NEP	2007	4aiii	none	158
7fg	NEP	2007	4aiv	none	2051
7fg	NEP	2007	4bi	none	82
7fg	NEP	2007	4bii	none	2
7fg	NEP	2007	none	none	9

Table 9.3.1.1 f. Landings of plaice by category. Left: Celtic Sea, Right : Divisions VIIfg

7bcefghjk

REG_AREA	SPECIES	YEAR	REG_GEAR	SPECON	LANDINGS
7bcefghjk	PLE	2003	4aii	none	396
7bcefghjk	PLE	2003	4aiii	none	52
7bcefghjk	PLE	2003	4aiv	none	269
7bcefghjk	PLE	2003	4av	none	1
7bcefghjk	PLE	2003	4bi	none	1184
7bcefghjk	PLE	2003	4bii	none	9
7bcefghjk	PLE	2003	4biii	none	2
7bcefghjk	PLE	2003	4ci	none	2
7bcefghjk	PLE	2003	4d	none	3
7bcefghjk	PLE	2003	none	none	57
7bcefghjk	PLE	2004	4aii	none	337
7bcefghjk	PLE	2004	4aiii	none	43
7bcefghjk	PLE	2004	4aiv	none	210
7bcefghjk	PLE	2004	4av	none	1
7bcefghjk	PLE	2004	4bi	none	1148
7bcefghjk	PLE	2004	4bii	none	4
7bcefghjk	PLE	2004	4ci	none	2
7bcefghjk	PLE	2004	4civ	none	1
7bcefghjk	PLE	2004	4d	none	12
7bcefghjk	PLE	2004	none	none	60
7bcefghjk	PLE	2005	4aii	none	344
7bcefghjk	PLE	2005	4aiii	none	43
7bcefghjk	PLE	2005	4aiv	none	147
7bcefghjk	PLE	2005	4bi	none	1000
7bcefghjk	PLE	2005	4bii	none	4
7bcefghjk	PLE	2005	4biii	none	1
7bcefghjk	PLE	2005	4ci	none	3
7bcefghjk	PLE	2005	4ciii	none	1
7bcefghjk	PLE	2005	4civ	none	1
7bcefghjk	PLE	2005	4d	none	19
7bcefghjk	PLE	2005	none	none	64
7bcefghjk	PLE	2006	4ai	none	1
7bcefghjk	PLE	2006	4aii	none	371
7bcefghjk	PLE	2006	4aiii	none	48
7bcefghjk	PLE	2006	4aiv	none	132
7bcefghjk	PLE	2006	4av	none	4
7bcefghjk	PLE	2006	4bi	none	941
7bcefghjk	PLE	2006	4bii	none	9
7bcefghjk	PLE	2006	4ci	none	1
7bcefghjk	PLE	2006	4cii	none	1
7bcefghjk	PLE	2006	4civ	none	1
7bcefghjk	PLE	2006	4d	none	23
7bcefghjk	PLE	2006	none	none	77
7bcefghjk	PLE	2007	4ai	none	2
7bcefghjk	PLE	2007	4aii	none	330
7bcefghjk	PLE	2007	4aiii	none	30
7bcefghjk	PLE	2007	4aiv	none	143
7bcefghjk	PLE	2007	4bi	none	687
7bcefghjk	PLE	2007	4bii	none	9
7bcefghjk	PLE	2007	4ci	none	1
7bcefghjk	PLE	2007	4civ	none	1
7bcefghjk	PLE	2007	4d	none	7
7bcefghjk	PLE	2007	none	none	82

7fg

REG_AREA	SPECIES	YEAR	REG_GEAR	SPECON	LANDINGS
7fg	PLE	2003	4aii	none	69
7fg	PLE	2003	4aiii	none	3
7fg	PLE	2003	4aiv	none	189
7fg	PLE	2003	4bi	none	299
7fg	PLE	2003	4bii	none	1
7fg	PLE	2003	4biii	none	1
7fg	PLE	2003	none	none	8
7fg	PLE	2004	4aii	none	59
7fg	PLE	2004	4aiii	none	3
7fg	PLE	2004	4aiv	none	151
7fg	PLE	2004	4bi	none	261
7fg	PLE	2004	4bii	none	2
7fg	PLE	2004	none	none	9
7fg	PLE	2005	4aii	none	53
7fg	PLE	2005	4aiii	none	1
7fg	PLE	2005	4aiv	none	105
7fg	PLE	2005	4bi	none	193
7fg	PLE	2005	4bii	none	3
7fg	PLE	2005	none	none	15
7fg	PLE	2006	4aii	none	55
7fg	PLE	2006	4aiii	none	2
7fg	PLE	2006	4aiv	none	89
7fg	PLE	2006	4bi	none	175
7fg	PLE	2006	4bii	none	2
7fg	PLE	2006	4civ	none	1
7fg	PLE	2006	4d	none	1
7fg	PLE	2006	none	none	40
7fg	PLE	2007	4aii	none	43
7fg	PLE	2007	4aiii	none	1
7fg	PLE	2007	4aiv	none	96
7fg	PLE	2007	4bi	none	185
7fg	PLE	2007	4bii	none	2
7fg	PLE	2007	4d	none	1
7fg	PLE	2007	none	none	54

Table 9.3.1.1g. Landings of saithe by category. Left: Celtic Sea, Right : Divisions VIIfg

7bcefghjk

REG_AREA	SPECIES	YEAR	REG_GEAR	SPECON	LANDINGS
7bcefghjk	POK	2003	4aii	none	153
7bcefghjk	POK	2003	4aiii	none	6
7bcefghjk	POK	2003	4aiv	none	427
7bcefghjk	POK	2003	4av	none	6
7bcefghjk	POK	2003	4bi	none	4
7bcefghjk	POK	2003	4bii	none	10
7bcefghjk	POK	2003	4biii	none	1
7bcefghjk	POK	2003	4ci	none	24
7bcefghjk	POK	2003	4cii	none	142
7bcefghjk	POK	2003	4ciii	none	50
7bcefghjk	POK	2003	4civ	none	1
7bcefghjk	POK	2003	4d	none	1
7bcefghjk	POK	2003	none	none	37
7bcefghjk	POK	2004	4aii	none	114
7bcefghjk	POK	2004	4aiii	none	11
7bcefghjk	POK	2004	4aiv	none	800
7bcefghjk	POK	2004	4av	none	7
7bcefghjk	POK	2004	4bi	none	5
7bcefghjk	POK	2004	4bii	none	9
7bcefghjk	POK	2004	4biii	none	1
7bcefghjk	POK	2004	4cii	none	104
7bcefghjk	POK	2004	4ciii	none	56
7bcefghjk	POK	2004	4civ	none	1
7bcefghjk	POK	2004	none	none	94
7bcefghjk	POK	2005	4aii	none	95
7bcefghjk	POK	2005	4aiii	none	5
7bcefghjk	POK	2005	4aiv	none	353
7bcefghjk	POK	2005	4bi	none	4
7bcefghjk	POK	2005	4bii	none	6
7bcefghjk	POK	2005	4biii	none	2
7bcefghjk	POK	2005	4ci	none	108
7bcefghjk	POK	2005	4cii	none	50
7bcefghjk	POK	2005	4ciii	none	29
7bcefghjk	POK	2005	4civ	none	1
7bcefghjk	POK	2005	4d	none	2
7bcefghjk	POK	2005	4e	none	2
7bcefghjk	POK	2005	none	none	20
7bcefghjk	POK	2006	4aii	none	45
7bcefghjk	POK	2006	4aiii	none	1
7bcefghjk	POK	2006	4aiv	none	302
7bcefghjk	POK	2006	4bi	none	3
7bcefghjk	POK	2006	4ci	none	3
7bcefghjk	POK	2006	4cii	none	104
7bcefghjk	POK	2006	4ciii	none	17
7bcefghjk	POK	2006	4civ	none	4
7bcefghjk	POK	2006	4d	none	1
7bcefghjk	POK	2006	none	none	2
7bcefghjk	POK	2007	4aii	none	51
7bcefghjk	POK	2007	4aiii	none	5
7bcefghjk	POK	2007	4aiv	none	337
7bcefghjk	POK	2007	4av	none	4
7bcefghjk	POK	2007	4bi	none	2
7bcefghjk	POK	2007	4ci	none	2
7bcefghjk	POK	2007	4cii	none	100
7bcefghjk	POK	2007	4ciii	none	46
7bcefghjk	POK	2007	4civ	none	5
7bcefghjk	POK	2007	4d	none	1
7bcefghjk	POK	2007	4e	none	4
7bcefghjk	POK	2007	none	none	3

7fg

REG_AREA	SPECIES	YEAR	REG_GEAR	SPECON	LANDINGS
7fg	POK	2003	4aii	none	38
7fg	POK	2003	4aiii	none	1
7fg	POK	2003	4aiv	none	133
7fg	POK	2003	4av	none	4
7fg	POK	2003	4bi	none	3
7fg	POK	2003	4bii	none	9
7fg	POK	2003	4biii	none	1
7fg	POK	2003	4ci	none	21
7fg	POK	2003	4cii	none	21
7fg	POK	2003	4ciii	none	38
7fg	POK	2003	4civ	none	1
7fg	POK	2003	none	none	9
7fg	POK	2004	4aii	none	60
7fg	POK	2004	4aiii	none	3
7fg	POK	2004	4aiv	none	89
7fg	POK	2004	4av	none	1
7fg	POK	2004	4bi	none	4
7fg	POK	2004	4bii	none	9
7fg	POK	2004	4biii	none	1
7fg	POK	2004	4cii	none	59
7fg	POK	2004	4ciii	none	26
7fg	POK	2004	none	none	53
7fg	POK	2005	4aii	none	64
7fg	POK	2005	4aiii	none	2
7fg	POK	2005	4aiv	none	56
7fg	POK	2005	4bi	none	4
7fg	POK	2005	4bii	none	5
7fg	POK	2005	4biii	none	2
7fg	POK	2005	4ci	none	43
7fg	POK	2005	4cii	none	19
7fg	POK	2005	4ciii	none	6
7fg	POK	2005	4civ	none	1
7fg	POK	2005	none	none	1
7fg	POK	2006	4aii	none	24
7fg	POK	2006	4aiv	none	77
7fg	POK	2006	4bi	none	3
7fg	POK	2006	4ci	none	2
7fg	POK	2006	4cii	none	33
7fg	POK	2006	4ciii	none	14
7fg	POK	2006	4civ	none	3
7fg	POK	2006	4d	none	1
7fg	POK	2007	4aii	none	17
7fg	POK	2007	4aiii	none	4
7fg	POK	2007	4aiv	none	69
7fg	POK	2007	4bi	none	2
7fg	POK	2007	4ci	none	2
7fg	POK	2007	4cii	none	39
7fg	POK	2007	4ciii	none	39
7fg	POK	2007	4civ	none	5
7fg	POK	2007	none	none	1

Table 9.3.1.1h. Landings of sole by category. Left: Celtic Sea, Right : Divisions VIIfg

7bcefghjk

REG_AREA	SPECIES	YEAR	REG_GEAR	SPECON	LANDINGS
7bcefghjk	SOL	2003	4ai	none	1
7bcefghjk	SOL	2003	4aii	none	309
7bcefghjk	SOL	2003	4aiii	none	25
7bcefghjk	SOL	2003	4aiv	none	224
7bcefghjk	SOL	2003	4av	none	1
7bcefghjk	SOL	2003	4bi	none	1502
7bcefghjk	SOL	2003	4bii	none	11
7bcefghjk	SOL	2003	4biii	none	1
7bcefghjk	SOL	2003	4ci	none	1
7bcefghjk	SOL	2003	4cii	none	2
7bcefghjk	SOL	2003	4ciii	none	1
7bcefghjk	SOL	2003	4civ	none	5
7bcefghjk	SOL	2003	4d	none	26
7bcefghjk	SOL	2003	none	none	100
7bcefghjk	SOL	2004	4aii	none	251
7bcefghjk	SOL	2004	4aiii	none	25
7bcefghjk	SOL	2004	4aiv	none	161
7bcefghjk	SOL	2004	4av	none	1
7bcefghjk	SOL	2004	4bi	none	1410
7bcefghjk	SOL	2004	4bii	none	5
7bcefghjk	SOL	2004	4biii	none	7
7bcefghjk	SOL	2004	4biv	none	1
7bcefghjk	SOL	2004	4ci	none	5
7bcefghjk	SOL	2004	4cii	none	7
7bcefghjk	SOL	2004	4ciii	none	2
7bcefghjk	SOL	2004	4civ	none	3
7bcefghjk	SOL	2004	4d	none	32
7bcefghjk	SOL	2004	none	none	131
7bcefghjk	SOL	2005	4aii	none	325
7bcefghjk	SOL	2005	4aiii	none	22
7bcefghjk	SOL	2005	4aiv	none	139
7bcefghjk	SOL	2005	4av	none	1
7bcefghjk	SOL	2005	4bi	none	1549
7bcefghjk	SOL	2005	4bii	none	6
7bcefghjk	SOL	2005	4biii	none	1
7bcefghjk	SOL	2005	4ci	none	5
7bcefghjk	SOL	2005	4ciii	none	1
7bcefghjk	SOL	2005	4civ	none	1
7bcefghjk	SOL	2005	4d	none	66
7bcefghjk	SOL	2005	none	none	120
7bcefghjk	SOL	2006	4aii	none	318
7bcefghjk	SOL	2006	4aiii	none	24
7bcefghjk	SOL	2006	4aiv	none	124
7bcefghjk	SOL	2006	4av	none	2
7bcefghjk	SOL	2006	4bi	none	1396
7bcefghjk	SOL	2006	4bii	none	12
7bcefghjk	SOL	2006	4ci	none	1
7bcefghjk	SOL	2006	4cii	none	2
7bcefghjk	SOL	2006	4ciii	none	2
7bcefghjk	SOL	2006	4d	none	31
7bcefghjk	SOL	2006	none	none	105
7bcefghjk	SOL	2007	4aii	none	345
7bcefghjk	SOL	2007	4aiii	none	23
7bcefghjk	SOL	2007	4aiv	none	116
7bcefghjk	SOL	2007	4av	none	1
7bcefghjk	SOL	2007	4bi	none	1313
7bcefghjk	SOL	2007	4bii	none	8
7bcefghjk	SOL	2007	4ci	none	2
7bcefghjk	SOL	2007	4cii	none	2
7bcefghjk	SOL	2007	4ciii	none	1
7bcefghjk	SOL	2007	4d	none	41
7bcefghjk	SOL	2007	none	none	100

7fg

REG_AREA	SPECIES	YEAR	REG_GEAR	SPECON	LANDINGS
7fg	SOL	2003	4aii	none	37
7fg	SOL	2003	4aiii	none	1
7fg	SOL	2003	4aiv	none	125
7fg	SOL	2003	4bi	none	1031
7fg	SOL	2003	4bii	none	7
7fg	SOL	2003	4cii	none	1
7fg	SOL	2003	none	none	2
7fg	SOL	2004	4aii	none	34
7fg	SOL	2004	4aiii	none	1
7fg	SOL	2004	4aiv	none	79
7fg	SOL	2004	4bi	none	989
7fg	SOL	2004	4bii	none	3
7fg	SOL	2004	4biii	none	1
7fg	SOL	2004	4d	none	2
7fg	SOL	2004	none	none	19
7fg	SOL	2005	4aii	none	44
7fg	SOL	2005	4aiv	none	70
7fg	SOL	2005	4bi	none	840
7fg	SOL	2005	4bii	none	6
7fg	SOL	2005	4civ	none	1
7fg	SOL	2005	none	none	16
7fg	SOL	2006	4aii	none	36
7fg	SOL	2006	4aiii	none	1
7fg	SOL	2006	4aiv	none	61
7fg	SOL	2006	4bi	none	734
7fg	SOL	2006	4bii	none	7
7fg	SOL	2006	4ciii	none	1
7fg	SOL	2006	4d	none	2
7fg	SOL	2006	none	none	42
7fg	SOL	2007	4aii	none	40
7fg	SOL	2007	4aiv	none	62
7fg	SOL	2007	4bi	none	760
7fg	SOL	2007	4bii	none	1
7fg	SOL	2007	4d	none	3
7fg	SOL	2007	none	none	46

Table 9.3.1.1 i. Landings of whiting by category. Left: Celtic Sea, Right : Divisions VIIfg

7bcefghjk

REG_AREA	SPECIES	YEAR	REG_GEAR	SPECON	LANDINGS
7bcefghjk	WHG	2003	4aii	none	3935
7bcefghjk	WHG	2003	4aiii	none	578
7bcefghjk	WHG	2003	4aiv	none	5869
7bcefghjk	WHG	2003	4av	none	9
7bcefghjk	WHG	2003	4bi	none	254
7bcefghjk	WHG	2003	4bii	none	18
7bcefghjk	WHG	2003	4biii	none	5
7bcefghjk	WHG	2003	4ci	none	12
7bcefghjk	WHG	2003	4cii	none	99
7bcefghjk	WHG	2003	4ciii	none	34
7bcefghjk	WHG	2003	4d	none	1
7bcefghjk	WHG	2003	4e	none	1
7bcefghjk	WHG	2003	none	none	236
7bcefghjk	WHG	2004	4ai	none	1
7bcefghjk	WHG	2004	4aii	none	3632
7bcefghjk	WHG	2004	4aiii	none	389
7bcefghjk	WHG	2004	4aiv	none	4580
7bcefghjk	WHG	2004	4av	none	22
7bcefghjk	WHG	2004	4bi	none	238
7bcefghjk	WHG	2004	4bii	none	9
7bcefghjk	WHG	2004	4biii	none	8
7bcefghjk	WHG	2004	4ci	none	4
7bcefghjk	WHG	2004	4cii	none	61
7bcefghjk	WHG	2004	4ciii	none	6
7bcefghjk	WHG	2004	4civ	none	1
7bcefghjk	WHG	2004	4e	none	3
7bcefghjk	WHG	2004	none	none	775
7bcefghjk	WHG	2005	4aii	none	6243
7bcefghjk	WHG	2005	4aiii	none	191
7bcefghjk	WHG	2005	4aiv	none	5567
7bcefghjk	WHG	2005	4bi	none	262
7bcefghjk	WHG	2005	4bii	none	11
7bcefghjk	WHG	2005	4biii	none	6
7bcefghjk	WHG	2005	4ci	none	49
7bcefghjk	WHG	2005	4cii	none	28
7bcefghjk	WHG	2005	4civ	none	2
7bcefghjk	WHG	2005	4d	none	1
7bcefghjk	WHG	2005	4e	none	4
7bcefghjk	WHG	2005	none	none	130
7bcefghjk	WHG	2006	4ai	none	1
7bcefghjk	WHG	2006	4aii	none	4465
7bcefghjk	WHG	2006	4aiii	none	120
7bcefghjk	WHG	2006	4aiv	none	4549
7bcefghjk	WHG	2006	4av	none	4
7bcefghjk	WHG	2006	4bi	none	133
7bcefghjk	WHG	2006	4bii	none	4
7bcefghjk	WHG	2006	4biii	none	1
7bcefghjk	WHG	2006	4ci	none	3
7bcefghjk	WHG	2006	4cii	none	28
7bcefghjk	WHG	2006	4d	none	1
7bcefghjk	WHG	2006	4e	none	45
7bcefghjk	WHG	2006	none	none	149
7bcefghjk	WHG	2007	4aii	none	4834
7bcefghjk	WHG	2007	4aiii	none	104
7bcefghjk	WHG	2007	4aiv	none	3506
7bcefghjk	WHG	2007	4av	none	6
7bcefghjk	WHG	2007	4bi	none	146
7bcefghjk	WHG	2007	4bii	none	1
7bcefghjk	WHG	2007	4ci	none	2
7bcefghjk	WHG	2007	4cii	none	34
7bcefghjk	WHG	2007	4ciii	none	4
7bcefghjk	WHG	2007	4civ	none	1
7bcefghjk	WHG	2007	4d	none	4
7bcefghjk	WHG	2007	4e	none	7
7bcefghjk	WHG	2007	none	none	132

7fg

REG_AREA	SPECIES	YEAR	REG_GEAR	SPECON	LANDINGS
7fg	WHG	2003	4aii	none	1824
7fg	WHG	2003	4aiii	none	312
7fg	WHG	2003	4aiv	none	4313
7fg	WHG	2003	4av	none	7
7fg	WHG	2003	4bi	none	172
7fg	WHG	2003	4bii	none	11
7fg	WHG	2003	4biii	none	4
7fg	WHG	2003	4ci	none	7
7fg	WHG	2003	4cii	none	3
7fg	WHG	2003	4ciii	none	26
7fg	WHG	2003	none	none	94
7fg	WHG	2004	4aii	none	2175
7fg	WHG	2004	4aiii	none	261
7fg	WHG	2004	4aiv	none	3620
7fg	WHG	2004	4av	none	21
7fg	WHG	2004	4bi	none	170
7fg	WHG	2004	4bii	none	7
7fg	WHG	2004	4biii	none	7
7fg	WHG	2004	4ci	none	3
7fg	WHG	2004	4cii	none	19
7fg	WHG	2004	4ciii	none	6
7fg	WHG	2004	4civ	none	1
7fg	WHG	2004	none	none	626
7fg	WHG	2005	4aii	none	4710
7fg	WHG	2005	4aiii	none	89
7fg	WHG	2005	4aiv	none	4527
7fg	WHG	2005	4bi	none	204
7fg	WHG	2005	4bii	none	10
7fg	WHG	2005	4biii	none	6
7fg	WHG	2005	4ci	none	13
7fg	WHG	2005	4cii	none	9
7fg	WHG	2005	none	none	48
7fg	WHG	2006	4ai	none	1
7fg	WHG	2006	4aii	none	3211
7fg	WHG	2006	4aiii	none	76
7fg	WHG	2006	4aiv	none	3788
7fg	WHG	2006	4bi	none	87
7fg	WHG	2006	4bii	none	3
7fg	WHG	2006	4cii	none	2
7fg	WHG	2006	none	none	62
7fg	WHG	2007	4aii	none	3443
7fg	WHG	2007	4aiii	none	66
7fg	WHG	2007	4aiv	none	2859
7fg	WHG	2007	4bi	none	101
7fg	WHG	2007	4ci	none	1
7fg	WHG	2007	4cii	none	3
7fg	WHG	2007	4ciii	none	4
7fg	WHG	2007	none	none	55

9.3.2. Celtic Sea overall area

All species

Figure 9.3.2.1. shows that landings from the Celtic Sea are dominated by anglerfish and hake. Whiting, haddock and Nephrops also contribute substantially.

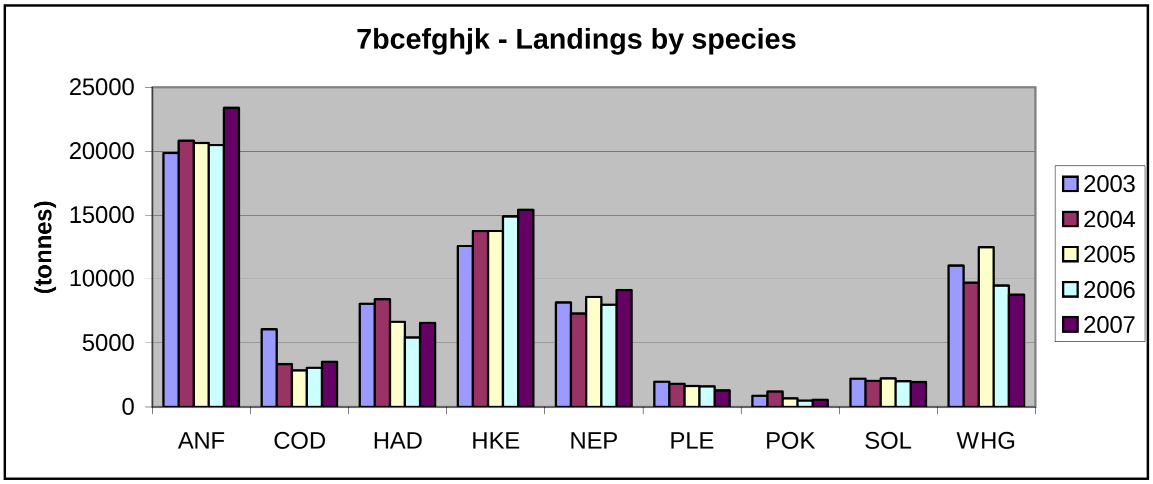


Figure 9.3.2.1. Landings by species from the Celtic Sea (ICES Divisions VIIbc,e-k). (Spanish data do not include VIIbc)

Cod landings

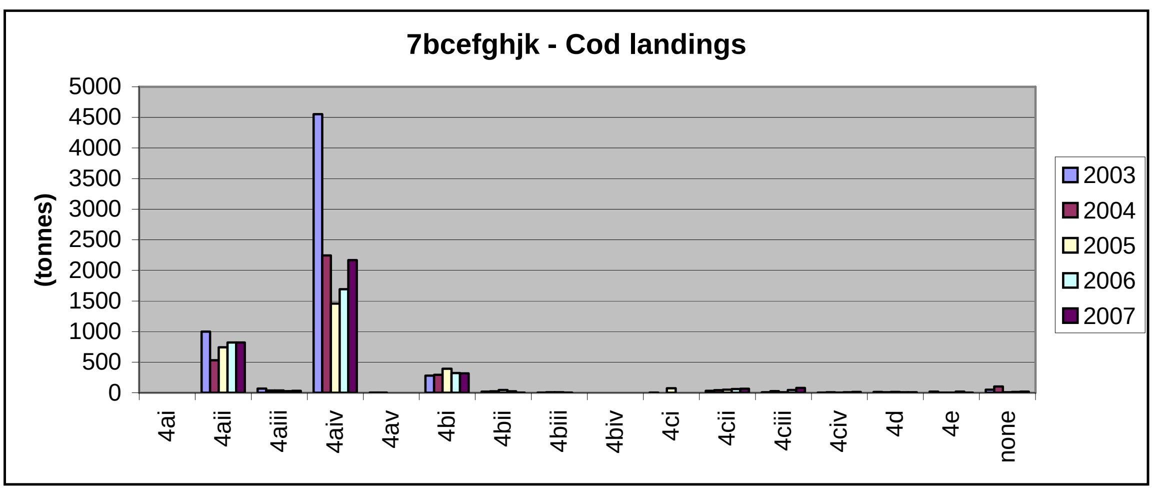
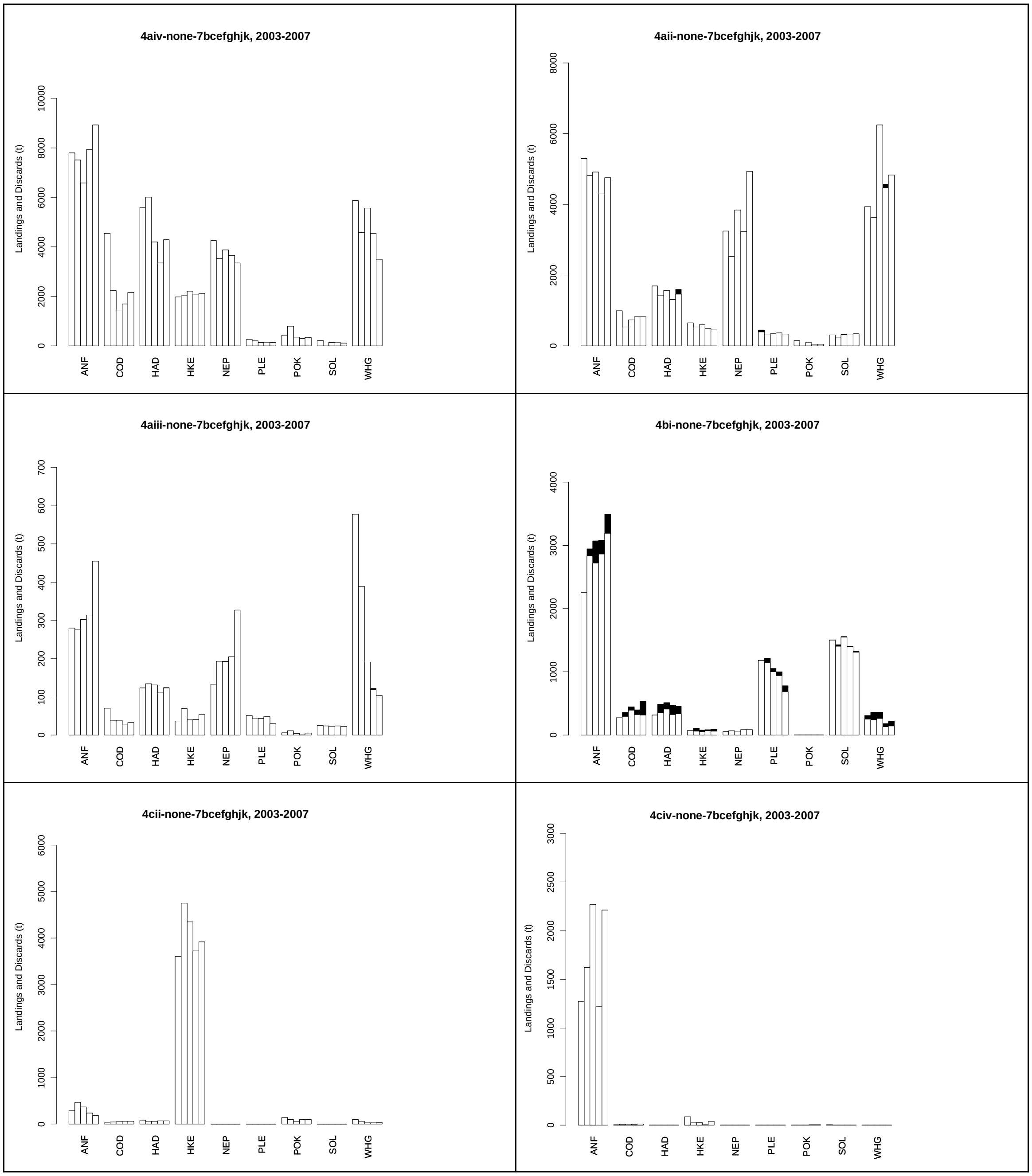


Figure 9.3.2.2. Cod landings from the Celtic Sea (ICES Divisions VIIbc,e-k) by each gear and mesh-size category.


4aiv-none-7bcefghjk, 2003-2007
4aii-none-7bcefghjk, 2003-2007
4aiii-none-7bcefghjk, 2003-2007
4bi-none-7bcefghjk, 2003-2007
4cii-none-7bcefghjk, 2003-2007
4civ-none-7bcefghjk, 2003-2007
Landings and Discards (t)
ANF
COD
HAD
HKE
NEP
PLE
POK
SOL
WHG

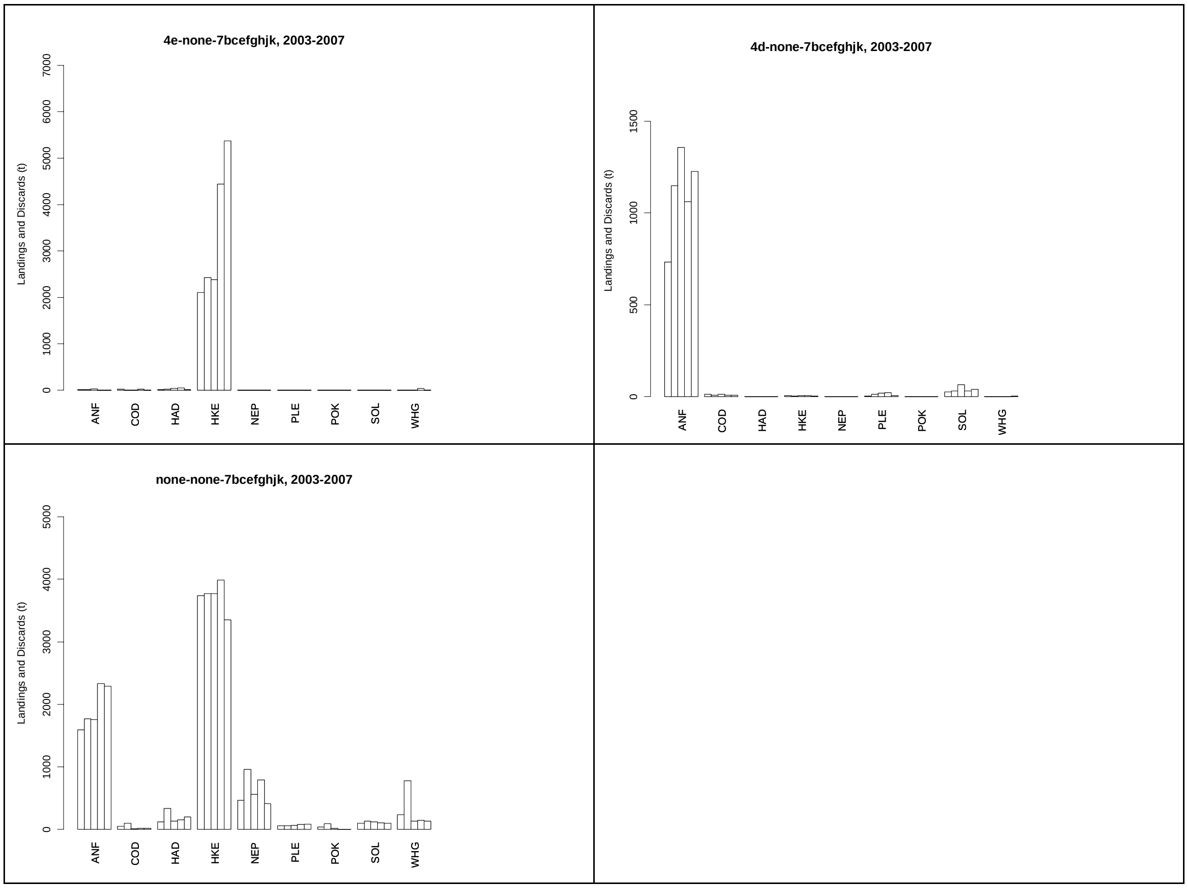


Figure 9.3.2.3. Landings (t) and discard (t) by gear/mesh-size category and species, 2003-2007 (from left to right) in the Celtic Sea (ICES Divisions VIIbc,e-k). Note that discard data are only available for some species and gears, so the lack of discard information for a given species/gear in the graphs means no information rather than zero discards.

9.3.3. VIIfg subset of Celtic sea

Because anglerfish and hake are mainly taken with nets and lines on the shelf of the Celtic Sea, it is not surprising to see that their contributions to the landings of the VIIfg area are much lower than for the whole Celtic Sea. Whiting, haddock, Nephrops, anglerfish and cod are the major contributors to the landings in that area.

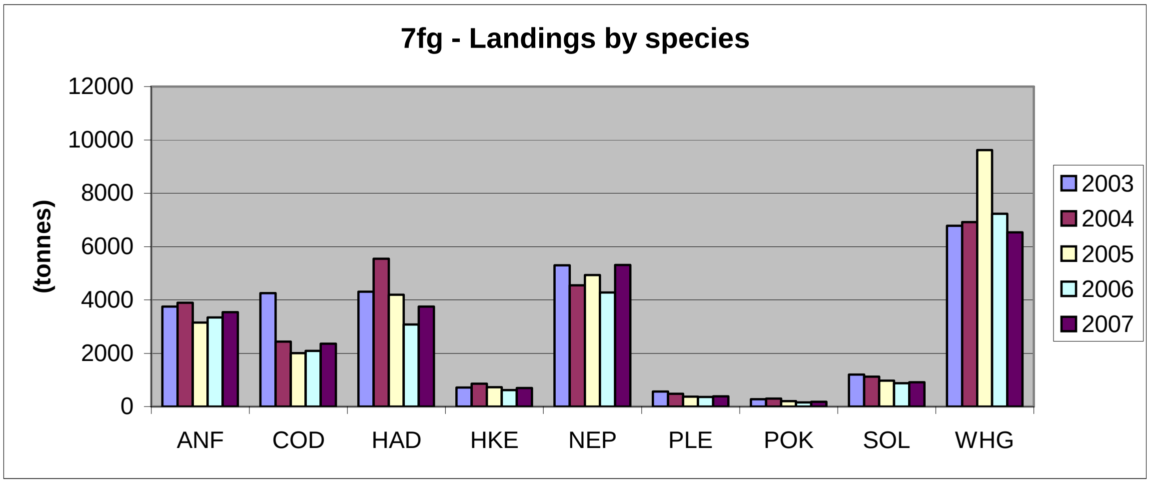


Figure 9.3.3.1. Landings by species from the ICES Divisions VIIfg.

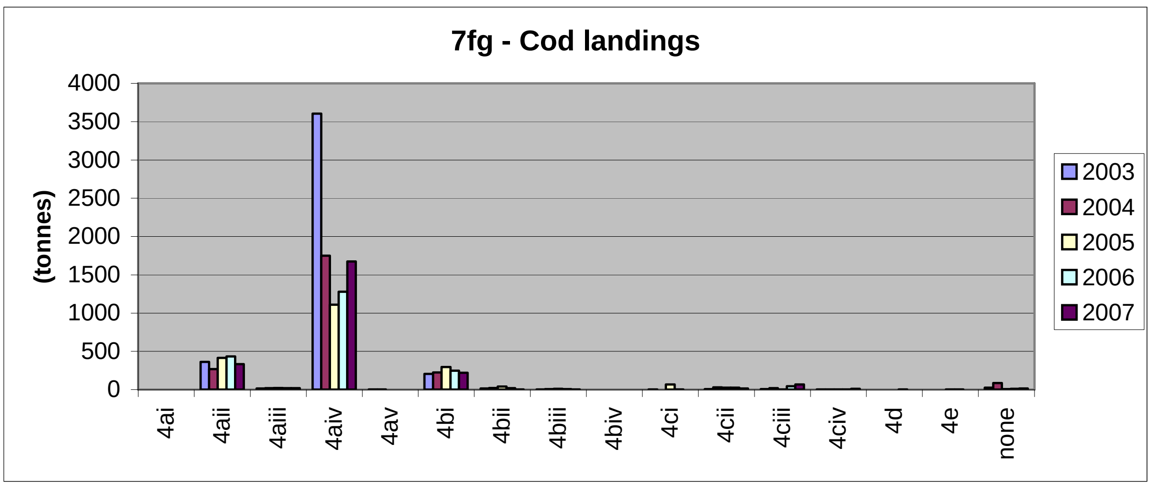
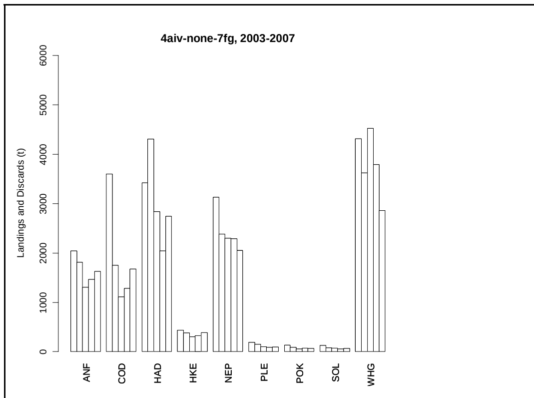
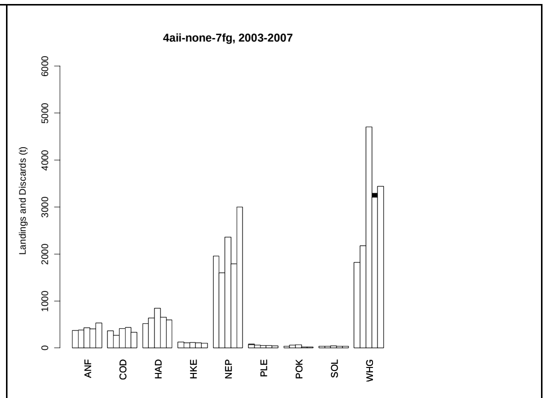
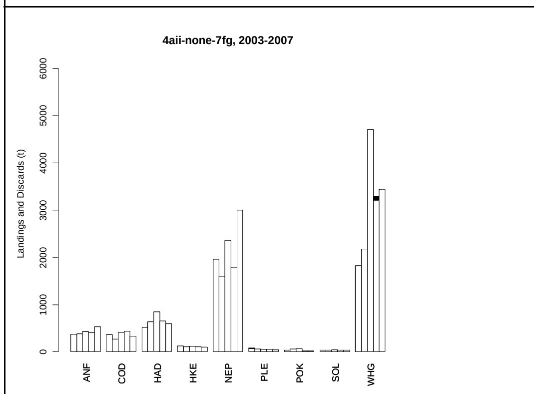


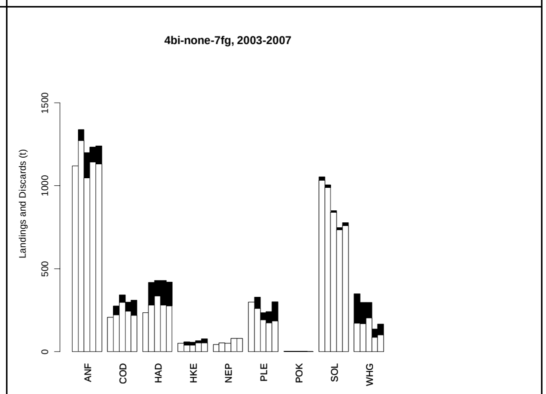
Figure 9.3.3.2. Cod landings from the 'Cod area' (ICES Divisions VIIfg) by each gear and mesh-size category.

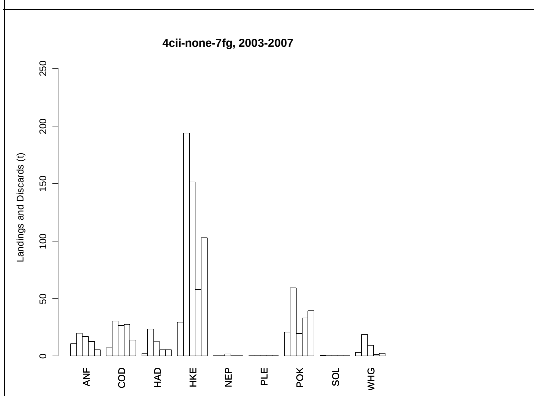
Landings of cod are mostly due to bottom trawls using 100-119 mm mesh size (4aiv) (about 64% of the total for the whole Celtic Sea and 72% for Divisions VIIfg), while the mesh-size category 4aii (70-89mm) represents 21% and 14% of these areas respectively, and the beam trawl using 80-89mm (4bi) 9% in both cases.

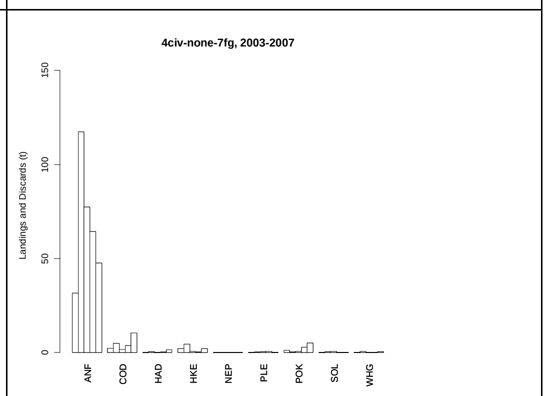












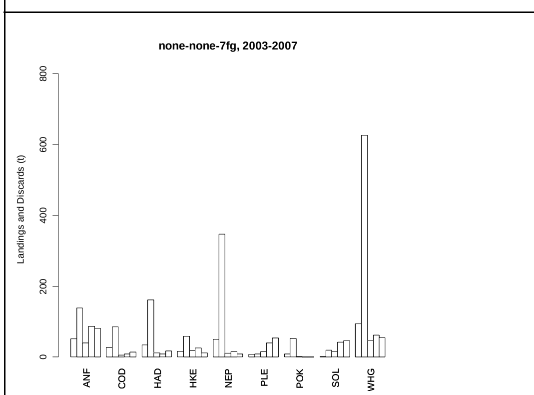


Figure 9.3.3.3. Landings (t) and discard (t) by gear/mesh-size category and species, 2003-2007 (from left to right) in the ICES Divisions VIIfg. Note that discard data are only available for some species and gears, so the lack of discard information for a given species/gear in the graphs means no information rather than zero discards.

9.4. CPUE

Information on CPUE should be treated as LPUE since discard information is not included at the present time. Tables 9.4.1 – 9.4.3 summarise the available information for cod, hake and Nephrops respectively.

Table 9.4.1. Cod CPUE (g/(kW*days)) by gear/mesh-size category and year, 2003-2007.

SPECIES	ANNEX	REG AREA	REG GEAR	SPECON	CPUE 2003	CPUE 2004	CPUE 2005	CPUE 2006	CPUE 2007
COD	IIx	7bcefghjk	4ai	none	1	5	2	1	
COD	IIx	7bcefghjk	4aii	none	38	20	23	32	33
COD	IIx	7bcefghjk	4aiii	none	41	20	18	19	22
COD	IIx	7bcefghjk	4aiv	none	113	64	42	49	67
COD	IIx	7bcefghjk	4av	none	8	13		7	5
COD	IIx	7bcefghjk	4bi	none	27	34	43	43	61
COD	IIx	7bcefghjk	4bii	none	13	46	49	64	37
COD	IIx	7bcefghjk	4biii	none	16	31	50	68	63
COD	IIx	7bcefghjk	4biv	none		23			
COD	IIx	7bcefghjk	4ci	none	26	8	109	15	20
COD	IIx	7bcefghjk	4cii	none	8	11	13	17	20
COD	IIx	7bcefghjk	4ciii	none	19	57	21	212	356
COD	IIx	7bcefghjk	4civ	none	3	4	3	10	8
COD	IIx	7bcefghjk	4d	none	21	11	11	9	8
COD	IIx	7bcefghjk	4e	none	22	8	4	14	2
COD	IIx	7bcefghjk	none	none	8	11	1	2	2

SPECIES	ANNEX	REG AREA	REG GEAR	SPECON	CPUE 2003	CPUE 2004	CPUE 2005	CPUE 2006	CPUE 2007
COD	IIy	7fg	4ai	none		10	31	7	
COD	IIy	7fg	4aii	none	96	80	82	122	92
COD	IIy	7fg	4aiii	none	67	65	82	110	82
COD	IIy	7fg	4aiv	none	219	127	87	103	150
COD	IIy	7fg	4av	none	87	168		72	
COD	IIy	7fg	4bi	none	44	57	77	76	85
COD	IIy	7fg	4bii	none	13	46	51	75	62
COD	IIy	7fg	4biii	none	19	30	55	67	60
COD	IIy	7fg	4biv	none		25			
COD	IIy	7fg	4ci	none	96	3	238	25	27
COD	IIy	7fg	4cii	none	13	54	59	72	36
COD	IIy	7fg	4ciii	none	74	154	55	582	678
COD	IIy	7fg	4civ	none	34	27	14	28	97
COD	IIy	7fg	4d	none	70	12	25	22	13
COD	IIy	7fg	4e	none	37		46	61	7
COD	IIy	7fg	none	none	24	43	7	12	15

Table 9.4.2. Hake CPUE (g/(kW*days)) by gear/mesh-size category and year, 2003-2007.

SPECIES	ANNEX	REG AREA	REG GEAR	SPECON	CPUE 2003	CPUE 2004	CPUE 2005	CPUE 2006	CPUE 2007
HKE	IIx	7bcefghjk	4ai	none	0	3	0	3	
HKE	IIx	7bcefghjk	4aii	none	25	20	19	19	18
HKE	IIx	7bcefghjk	4aiii	none	21	35	19	26	36
HKE	IIx	7bcefghjk	4aiv	none	49	58	64	60	66
HKE	IIx	7bcefghjk	4av	none	52	16	15	21	21
HKE	IIx	7bcefghjk	4bi	none	7	10	8	9	10
HKE	IIx	7bcefghjk	4bii	none	20	18	17	28	23
HKE	IIx	7bcefghjk	4biii	none	17	19	22	12	33
HKE	IIx	7bcefghjk	4biv	none	7	2			
HKE	IIx	7bcefghjk	4ci	none	937	67	433	254	171
HKE	IIx	7bcefghjk	4cii	none	875	1217	1113	1018	1204
HKE	IIx	7bcefghjk	4ciii	none	35	49	10	41	103
HKE	IIx	7bcefghjk	4civ	none	49	9	13	4	22
HKE	IIx	7bcefghjk	4d	none	8	3	5	6	3
HKE	IIx	7bcefghjk	4e	none	2440	3510	2752	3086	2954
HKE	IIx	7bcefghjk	none	none	565	404	502	530	440

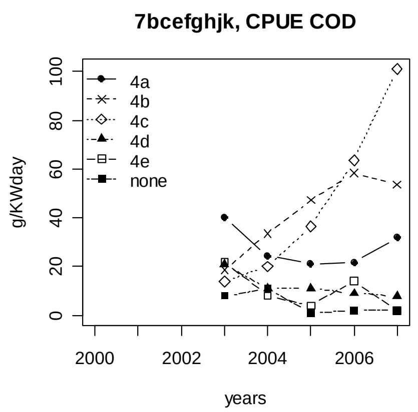
SPECIES	ANNEX	REG AREA	REG GEAR	SPECON	CPUE 2003	CPUE 2004	CPUE 2005	CPUE 2006	CPUE 2007
HKE	IIy	7fg	4ai	none			3	7	
HKE	IIy	7fg	4aii	none	33	32	23	31	27
HKE	IIy	7fg	4aiii	none	64	99	60	90	82
HKE	IIy	7fg	4aiv	none	27	28	24	27	35
HKE	IIy	7fg	4av	none	175	21		37	
HKE	IIy	7fg	4bi	none	11	13	13	17	21
HKE	IIy	7fg	4bii	none	18	19	16	28	41
HKE	IIy	7fg	4biii	none	21	20	24	12	37
HKE	IIy	7fg	4biv	none	7	1			
HKE	IIy	7fg	4ci	none	140	1	236	64	12
HKE	IIy	7fg	4cii	none	54	342	337	152	261
HKE	IIy	7fg	4ciii	none	110	174	9	110	163
HKE	IIy	7fg	4civ	none	30	25	6	2	19
HKE	IIy	7fg	4d	none	3	0	3	1	1
HKE	IIy	7fg	4e	none	94	200	58	208	4
HKE	IIy	7fg	none	none	14	30	21	32	13

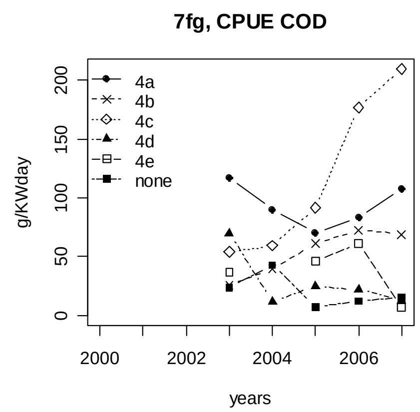
Table 9.4.3. Nephrops CPUE (g/(kW*days)) by gear/mesh-size category and year, 2003-2007.

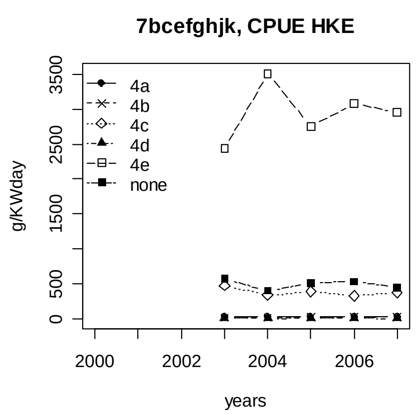
SPECIES	ANNEX	REG AREA	REG GEAR	SPECON	CPUE 2003	CPUE 2004	CPUE 2005	CPUE 2006	CPUE 2007
NEP	IIx	7bcefghjk	4ai	none	115			15	
NEP	IIx	7bcefghjk	4aii	none	125	93	119	125	198
NEP	IIx	7bcefghjk	4aiii	none	78	99	92	133	219
NEP	IIx	7bcefghjk	4aiv	none	105	100	112	106	104
NEP	IIx	7bcefghjk	4av	none	0	4		66	50
NEP	IIx	7bcefghjk	4bi	none	5	6	6	9	10
NEP	IIx	7bcefghjk	4bii	none	9	37	32	15	15
NEP	IIx	7bcefghjk	4biii	none	16	30	44	50	9
NEP	IIx	7bcefghjk	4biv	none	14				
NEP	IIx	7bcefghjk	4ci	none		26	27	28	
NEP	IIx	7bcefghjk	4cii	none	0		0	0	
NEP	IIx	7bcefghjk	4ciii	none		1			
NEP	IIx	7bcefghjk	4civ	none				0	0
NEP	IIx	7bcefghjk	4d	none	0		0	0	0
NEP	IIx	7bcefghjk	4e	none		1	7		1
NEP	IIx	7bcefghjk	none	none	70	103	75	105	54

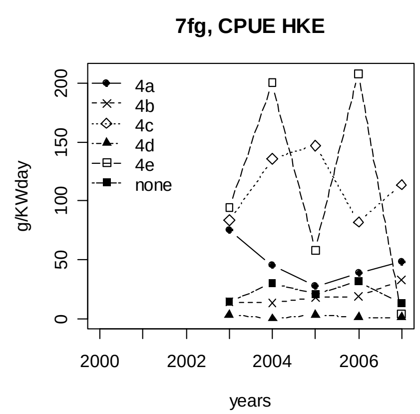
SPECIES	ANNEX	REG AREA	REG GEAR	SPECON	CPUE 2003	CPUE 2004	CPUE 2005	CPUE 2006	CPUE 2007
NEP	IIy	7fg	4ai	none				18	
NEP	IIy	7fg	4aii	none	521	478	470	505	830
NEP	IIy	7fg	4aiii	none	403	443	625	505	751
NEP	IIy	7fg	4aiv	none	191	173	180	184	184
NEP	IIy	7fg	4av	none	2	56		152	
NEP	IIy	7fg	4bi	none	9	11	12	20	22
NEP	IIy	7fg	4bii	none	11	41	33	10	30
NEP	IIy	7fg	4biii	none	21	22	50	53	13
NEP	IIy	7fg	4biv	none	20				
NEP	IIy	7fg	4ci	none			36	58	
NEP	IIy	7fg	4cii	none	0		4		
NEP	IIy	7fg	4civ	none					0
NEP	IIy	7fg	none	none	44	174	12	20	9

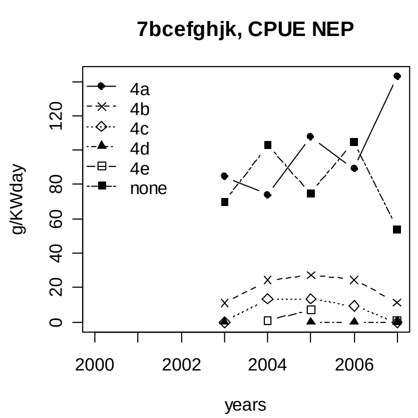
7bcefghjk	7fg











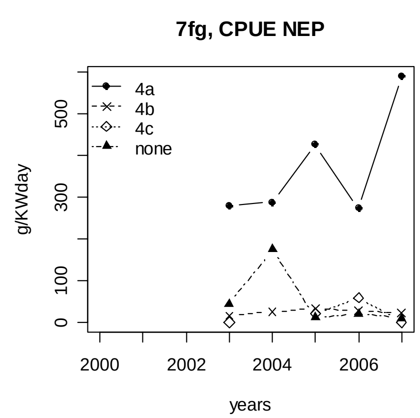


Figure 9.4.1. CPUE for cod, hake and Nephrops (from top to bottom) and for Celtic Sea and VIIfg (from left to right) and for gear category and years 2003-2007. Spanish data not included.

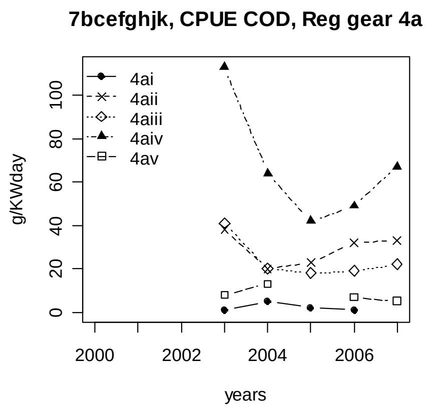
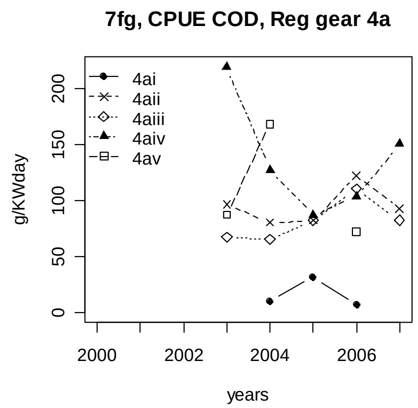
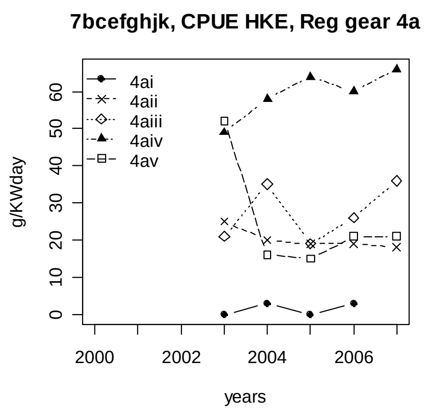
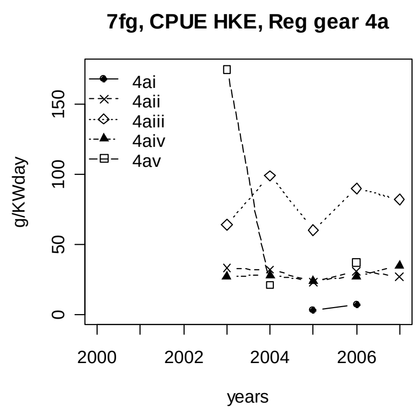
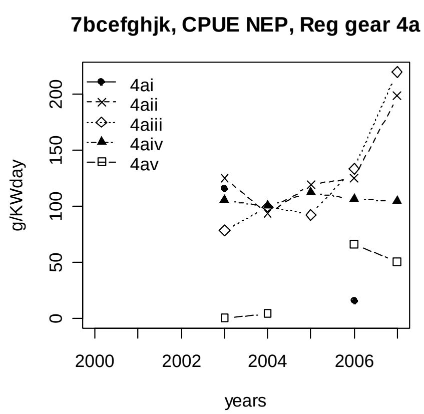
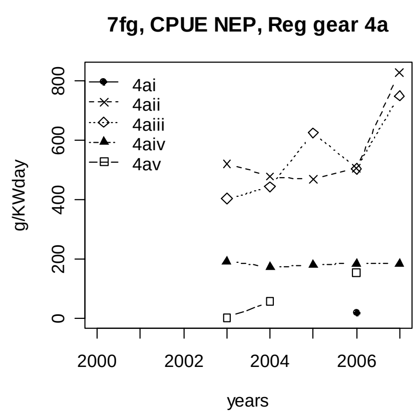
7bcefghjk	7fg
	
	
	

Figure 9.4.2. CPUE for cod, hake and Nephrops (from top to bottom) and for Celtic Sea and VIIfg (from left to right) and for mesh-size category of otter trawl, and years 2003-2007. Spanish data not included.

7bcefghjk	7fg

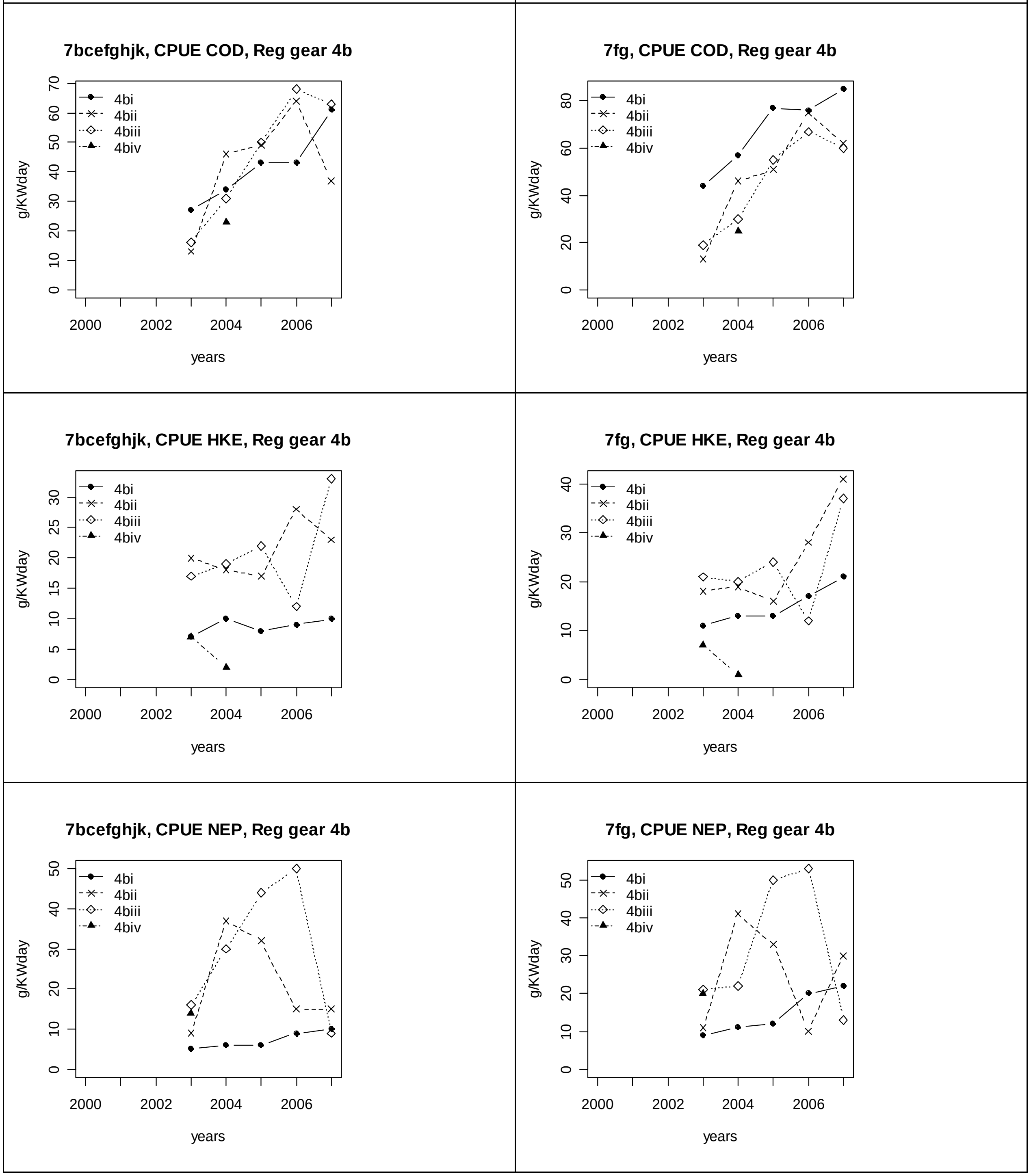


Figure 9.4.3. CPUE for cod, hake and Nephrops (from top to bottom) and for Celtic Sea and VIIfg (from left to right) and for mesh-size category of beam trawl, and years 2003-2007. Spanish data not included.

Figure 9.4.2 shows that after a decrease in the earlier period (2003-2005) of around 60%, the CPUE of cod for the category contributing most to the landings (4aiv), experiences an increase in recent years of about 60 and 70% respectively for the whole Celtic Sea and for area VIIfg).

Comparison

Table 9.4.1 and Figure 9.4.1 suggest that CPUE of cod are much higher in VIIfg than in the Celtic Sea as a whole for most/all the gear and mesh size-category. This is particularly the case for the two main categories, 100-119mm (4aiv) and 70-89mm (4aii) for which the cod CPUE is 2.1 and 3.3 times higher respectively.

9.5. Ranked gear categories

Tables 9.5.1 and 9.5.2 provide an indication of the ranking (highest first) of cod catches in different gear categories for Celtic Sea overall and VIIfg part of Celtic Sea.

Table 9.5.1. Celtic Sea - Ranked derogations according to relative cod catches in weight (t) 2003-2007.

Gear/mesh-size category	2003	2004	2005	2006	2007	mean(2003-2007)
4aiv	75%	67%	51%	55%	61%	62%
4aii	16%	16%	26%	27%	23%	22%
4bi	5%	9%	14%	11%	9%	9%
4cii	1%	1%	2%	2%	2%	1%
4aiii	1%	1%	1%	1%	1%	1%
none	1%	3%	0%	0%	0%	1%
4ciii	0%	1%	0%	2%	2%	1%
4bii	0%	1%	2%	1%	0%	1%
4ci	0%	0%	3%	0%	0%	1%
4e	0%	0%	0%	1%	0%	0%
4d	0%	0%	0%	0%	0%	0%
4civ	0%	0%	0%	0%	0%	0%
4biii	0%	0%	0%	0%	0%	0%
4av	0%	0%	0%	0%	0%	0%
4biv	0%	0%	0%	0%	0%	0%
	100%	100%	100%	100%	100%	100%

Ranking is according to 2007.

Table 9:5.2. Divisions VIIfg - Ranked derogations according to relative cod catches in weight (t) 2003-2007. Ranking is according to 2007.

Gear/mesh-size category	2003	2004	2005	2006	2007	mean 2003-2007
4aiv	85%	72%	55%	61%	71%	69%
4aii	8%	11%	21%	21%	14%	15%
4bi	5%	9%	15%	12%	9%	10%
4ciii	0%	1%	0%	2%	3%	1%
none	1%	4%	0%	0%	1%	1%
4cii	0%	1%	1%	1%	1%	1%
4bii	0%	1%	2%	1%	0%	1%
4aiii	0%	1%	1%	1%	1%	1%
4ci	0%	0%	3%	0%	0%	1%
4biii	0%	0%	1%	0%	0%	0%
4civ	0%	0%	0%	0%	0%	0%
4e	0%	0%	0%	0%	0%	0%
4d	0%	0%	0%	0%	0%	0%
4av	0%	0%	0%	0%	0%	0%
Total	100%	100%	100%	100%	100%	100%

In both areas, category 4aiv (100-119 mm) contributes 60-70% to the total landings of cod.

9.6. Unregulated/Unallocated gear

The ‘none’ category should be investigated carefully. The trend in effort for this category is provided in Figure 9.2.2.2. If most of the effort reported in this category refers to non-regulated gear (pots etc) this will not affect the conclusion of the analysis of the trends of effort. On the other hand, if the decreasing trend in the amount of effort in this category is due to a better reporting of mesh-size in the data-base, this should be taken into account when looking at the trends of effort by gear category.

9.6.1. Celtic Sea all

Figure 9.6.1.1. shows that, except in 2003 and 2007, a substantial amount of effort reported into the ‘none’ category comes from fishing operations using otter trawls (but without any specification of mesh-size). This accounts for less than 10% of the total effort in the Celtic Sea. For beam trawlers, the contribution of the ‘none category’ to the total effort is very low (practically nil) since 2003. Details for the unregulated gears are given in Table 9.6.1.1 below.

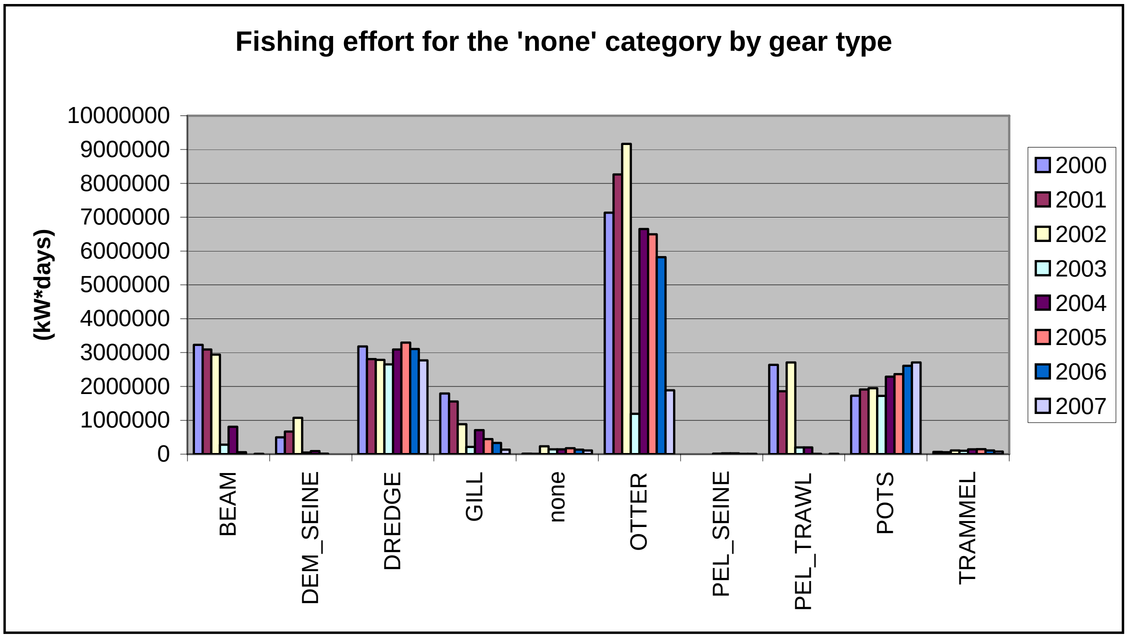


Fig. 9.6.1.1. Nominal effort for gear-category ‘none’ by gear type in the Celtic Sea, 2000-2007.

Table 9.6.1.1 Unregulated gear effort in the Celtic Sea as a whole

ANNEX	REG AREA	REG GEAR	Gear code	Mesh size	2000	2001	2002	2003	2004	2005	2006	2007
IIx	7bcefghjk	none	PEL_TRAWL	32-54	3197249	3585650	9606236	11313257	12462217	12157535	10399696	9862466
IIx	7bcefghjk	none	DREDGE	none	3178983	2811231	2783570	2649472	3093938	3301200	3108783	2765571
IIx	7bcefghjk	none	POTS	none	1723581	1912946	1951497	1719565	2290111	2365905	2614716	2712882
IIx	7bcefghjk	none	OTTER	none	7133587	8265851	9164396	1190549	6650937	6495638	5819750	1887256
IIx	7bcefghjk	none	DREDGE	90-99	47974	95399	149608	173030	189630	356084	778250	1210077
IIx	7bcefghjk	none	PEL_TRAWL	55-69	13266	32357	103941	272842	269371	171576	61712	515959
IIx	7bcefghjk	none	OTTER	32-54	404773	386967	273636	603182	572165	906247	247998	197306
IIx	7bcefghjk	none	DREDGE	16-31	805	5637	79264	83460	104436	165490	161082	169308
IIx	7bcefghjk	none	DREDGE	<16	147	2703	60588	164643	115590	148316	108907	141619
IIx	7bcefghjk	none	GILL	none	1794760	1556893	887161	218847	707202	443937	331247	132901
IIx	7bcefghjk	none	none	none	14866	9955	232190	137662	136973	170788	130512	107923
IIx	7bcefghjk	none	TRAMMEL	none	66134	57994	106294	95596	140599	150595	106490	76249
IIx	7bcefghjk	none	PEL_SEINE	<16	25409	32077	43671	123818	89001	78069	131751	74295
IIx	7bcefghjk	none	DREDGE	32-54		2080	10934	5023	2676	43839	39094	48564
IIx	7bcefghjk	none	POTS	10-30			50715	80703	22606	63504	36514	48338
IIx	7bcefghjk	none	DREDGE	80-89	207571	190603	158197	136515	138878	29376	29363	27727
IIx	7bcefghjk	none	OTTER	55-69	14323	27867	69821	154614	224347	130798	37522	27513
IIx	7bcefghjk	none	OTTER	<16	27070	1069	130125	38375	6469	11131	5149	12494
IIx	7bcefghjk	none	PEL_SEINE	none	1720		1148	18141	28348	22996	4812	7666
IIx	7bcefghjk	none	PEL_TRAWL	none	2632801	1856429	2707766	195503	196675	4786	320	7489
IIx	7bcefghjk	none	DREDGE	100-119	9553	5481	5294	29149	11213	735	7537	7149
IIx	7bcefghjk	none	BEAM	none	3229155	3092341	2939809	284375	809309	59853		6120
IIx	7bcefghjk	none	BEAM	<16		3634		2752	1388	16125	9269	6031
IIx	7bcefghjk	none	GILL	31-49	2329	33	790		38185	10930	4704	2791
IIx	7bcefghjk	none	DREDGE	>=120			1140	306	2487	587	1218	2569
IIx	7bcefghjk	none	TRAMMEL	31-49		102			294	588	655	1472
IIx	7bcefghjk	none	DREDGE	70-79	840	1112	775	3062		1704	8809	1104
IIx	7bcefghjk	none	DREDGE	55-69	784	683	1053	280	151	5348	500	910
IIx	7bcefghjk	none	POTS	90-99			1024	323				162
IIx	7bcefghjk	none	BEAM	16-31	157	9476			1476	216	2952	
IIx	7bcefghjk	none	BEAM	32-54				1100	2640	654		
IIx	7bcefghjk	none	BEAM	55-69		369						
IIx	7bcefghjk	none	BEAM	70-79					232	5372	1184	
IIx	7bcefghjk	none	DEM_SEINE	none	492608	670700	1076170	51582	93928	13697		
IIx	7bcefghjk	none	PEL_SEINE	32-54	43095	40529	123386	151047	123386	123386		
IIx	7bcefghjk	none	PEL_SEINE	55-69				15888				
IIx	7bcefghjk	none	PEL_TRAWL	<16	1051	1180	1550	2930	11546			
IIx	7bcefghjk	none	POTS	>=220	285	5038			6646	330		
IIx	7bcefghjk	none	POTS	100-109			89					
IIx	7bcefghjk	none	POTS	110-149					220		305	
IIx	7bcefghjk	none	POTS	31-49				1296		2903		
IIx	7bcefghjk	none	POTS	50-59				810				
IIx	7bcefghjk	none	POTS	80-89					48		95	

Landings data attributable to the none gear category is shown in Figure 9.6.1.2. It should be kept in mind that even though Spanish information on effort has been provided by gear and mesh-size category, this is not the case for the landings data. Thus, the landings for the 'none' category must not be related to the effort for this category. Since the Spanish landings in the Celtic Sea are dominated by hake and anglerfish, it is not surprising to see these species in that graph.

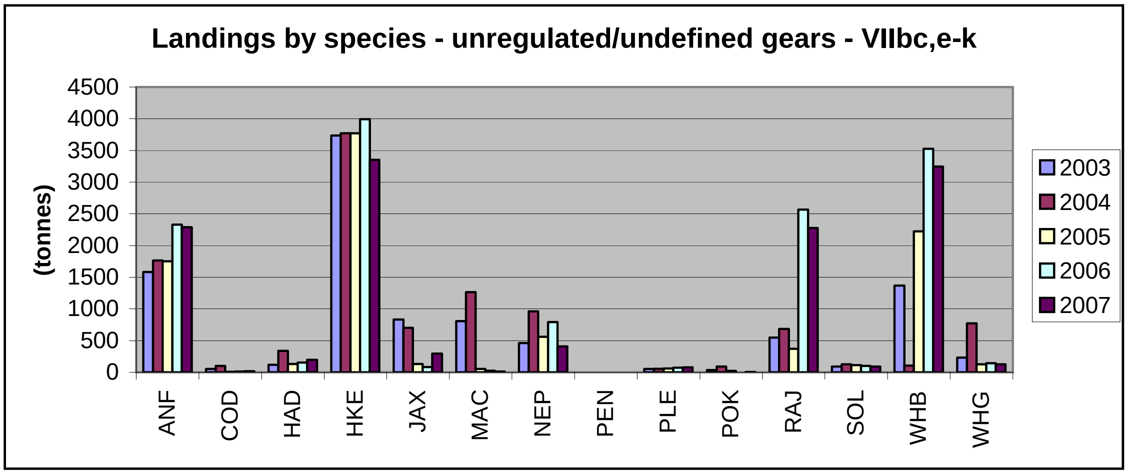


Fig. 9.6.1.2. Landings by species for the gear-category 'none' in the Celtic Sea, 2003-2007.

A more detailed breakdown of cod landings by the 'none' category in the Celtic Sea is given in Figure 9.6.1.3. Cod landings for this none category are very small, particularly since 2005.

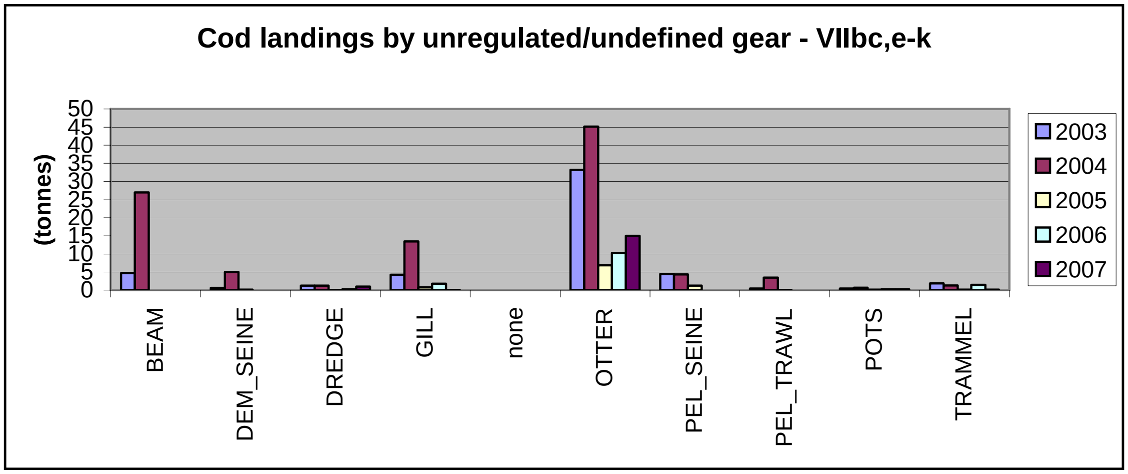


Fig. 9.6.1.3. Landings of cod for the gear-category 'none' by gear type in the Celtic Sea (Divisions VIIbc,e-k), 2003-2007.

9.6.2. Unregulated/Unallocated gears in VIIfg

Figure 9.6.2.1. shows that most of the effort into the 'none' category in VIIfg comes from fishing operations using otter trawls and beam trawls (but without any specification for the mesh-size) in the years 2000-2002 (a shortage of Irish detailed information prevents analysis over a longer period). These gears account for around 7% and 10% of total effort in that area .

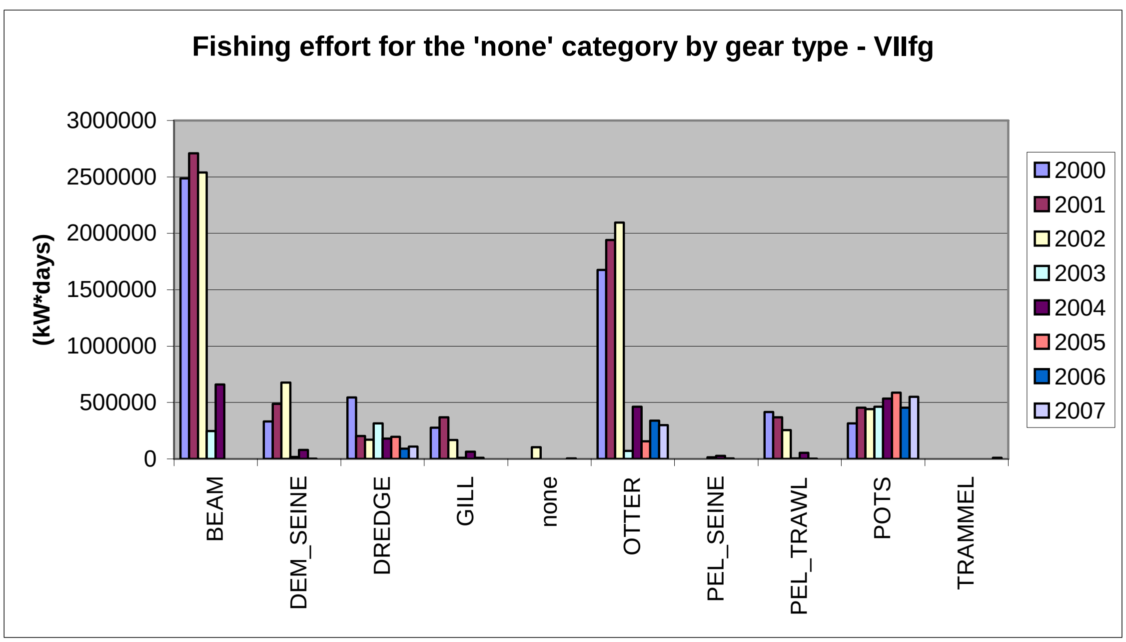


Fig. 9.6.2.1. Nominal effort for gear-category 'none' by gear type in Divisions VIIfg, 2000-2007.

Species composition of the landings by unregulated/undefined gears is given in Figure 9.6.2.2

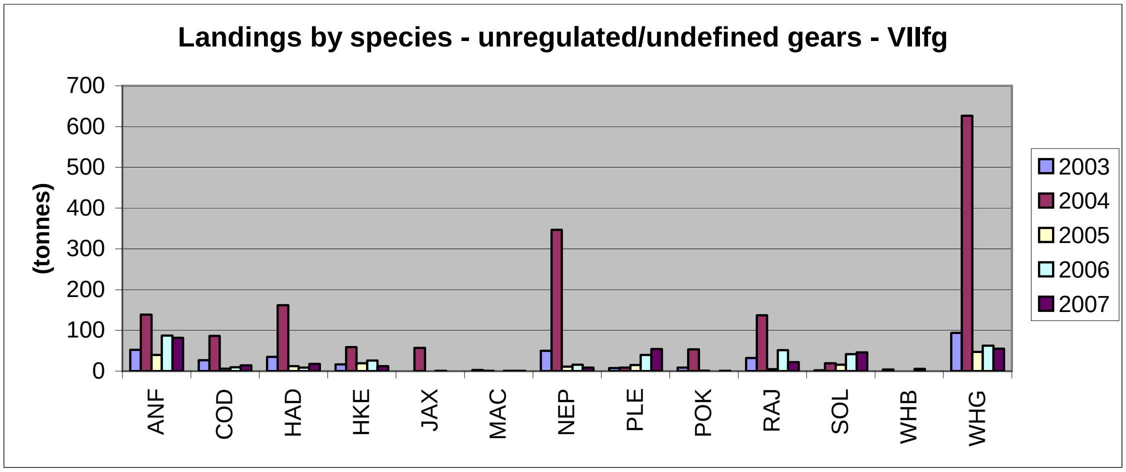


Fig. 9.6.2.2. Landings by species for the gear-category 'none' in Divisions VIIfg, 2003-2007.

A more detailed breakdown of cod landings by the 'none' category in VIIfg is given in Figure 9.6.2.3. The conclusion for this VIIfg area is very similar to the one for the Celtic Sea as a whole: i.e. landings of cod from the 'none' category are very small particularly in recent years.

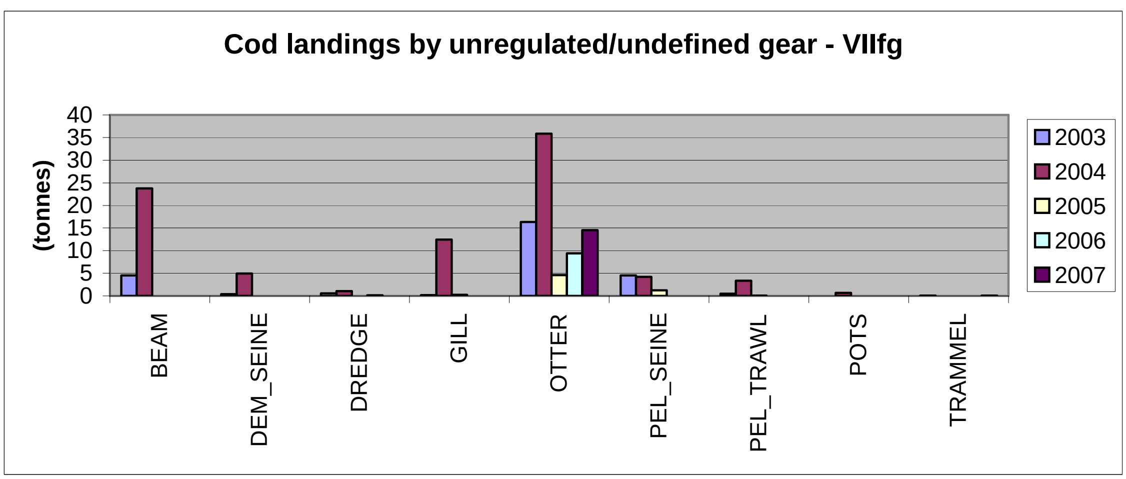


Fig. 9.6.2.3. Landings of cod for the gear-category 'none' by gear type in Divisions VIIfg, 2003-2007.

9.7. Under 10m

Some French information is available for the under 10m fleet. However, nearly all the activity of this French fleet takes place in Division VIIe,,and presented in section 8 (Table 8.9.1 and 8.9.2), thus not repeated here.

Irish under 10 meter vessel landings are not recorded by gear type, therefore Tables 9.7.1-2 represent landings by all gear types used by these vessels in the Celtic Sea and in Divisions VIIfg, however this information is known to be incomplete. No area specific vessel numbers or effort is available from Ireland, for further description of information provided by Ireland, see section 5.5.5.

Table 9.7.1. Irish landings of cod, plaice and sole from vessels under 10m in ICES Divisions VIIb-k. Partial information.

Species	2003	2004	2005	2006	2007
COD	124.9	17.7	19.3	11.0	
PLE	4.4	1.4	0.1	0.9	1.2
SOL	1.0	1.6	0.5	1.1	1.3
Total	130.3	20.7	19.9	13.0	2.5

Table 9.7.2. Irish landings of cod, plaice and sole from vessels under 10m in ICES Divisions VIIfg. Partial information.

Species	2003	2004	2005	2006	2007
COD	61.8	17.3	18.7	9.5	
PLE	4.2	0.0			
SOL	0.9	0.1		0.1	
Total	66.8	17.4	18.7	9.6	0.0

Landings information was also supplied by England and Wales for 2007. Table 9.7.3 shows the landings of various species by country for 2007 for the Celtic Sea area overall. Table 9.7.4 shows the same information for VIIfg. Since the data are regarded as incomplete, these figures represent minimum estimates of the contribution of under 10m vessels.

Table 9.7.3 Landings by under 10m vessels in 2007 by country and species in Celtic Sea overall

	France	E&W	Ireland	Spain	Total
cod		67	0		67
plaice		101	1.3		102.3
sole		67	1.2		68.2
hake		2.2	10.8		13
Nephrops	0	0	7.3		7.3

Table 9.7.4 Landings by under 10m vessels in 2007 by country and species in VIIfg

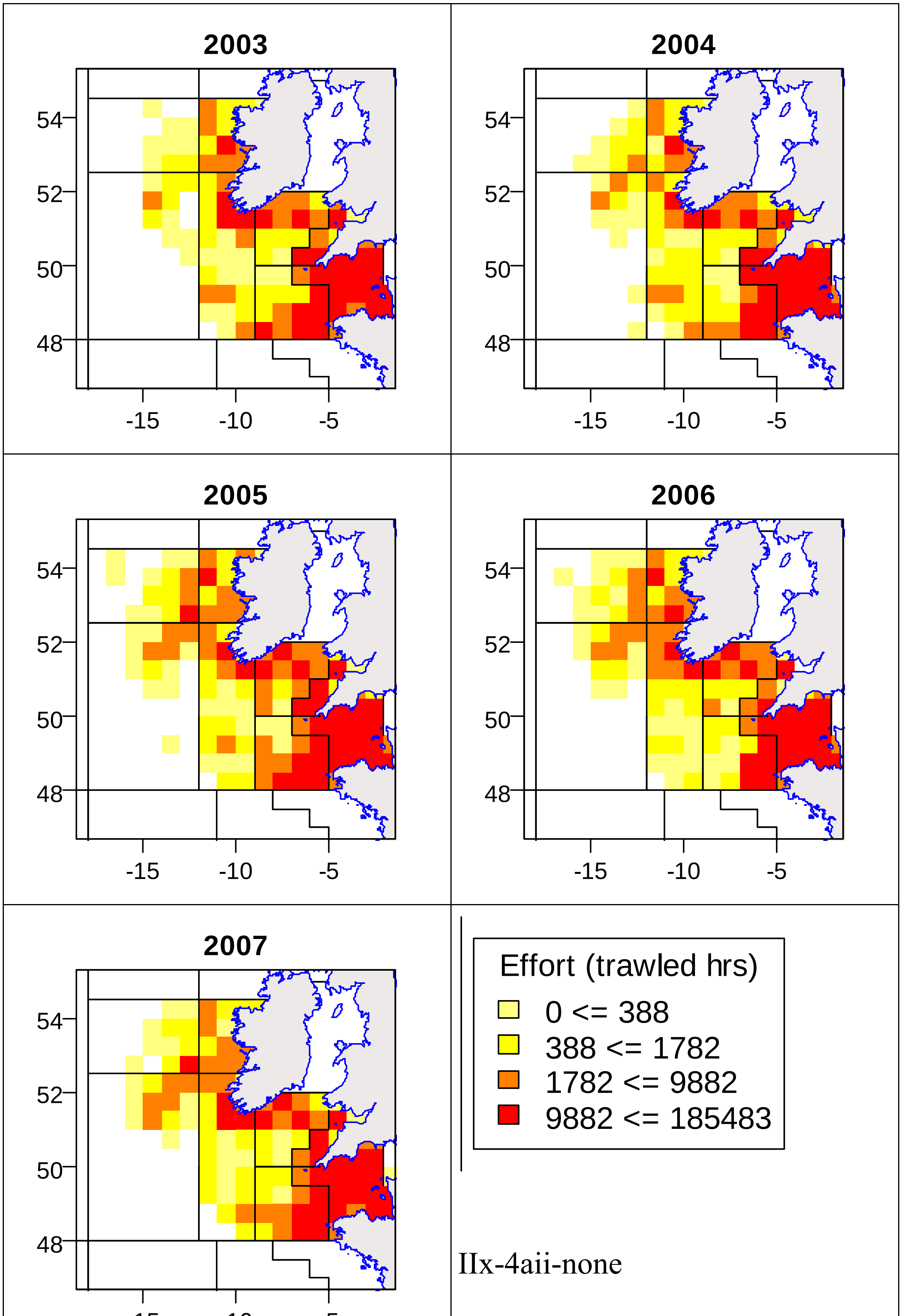
	France	E&W	Ireland	Spain	Total
cod	0	13	0		13.0
plaice	0	21	0		21.0
sole		23	0		23.0
hake	0	0.88	0		0.9
Nephrops	0	0	0		0.0

9.8. Relative importance of un-regulated and under 10m vessels in overall

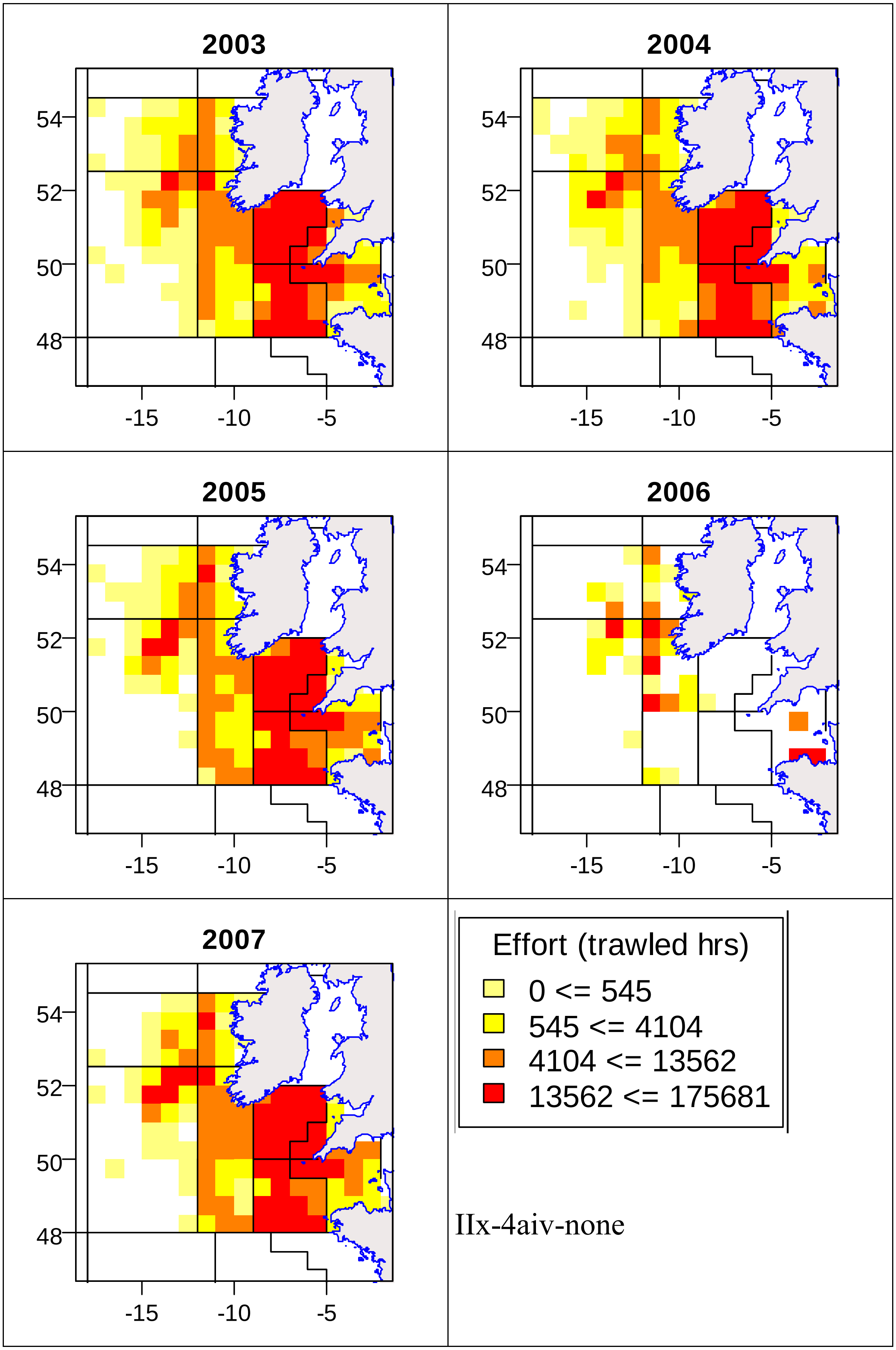
The two previous sections suggest that even though the fishing effort for unregulated/undefined gear/mesh-size and under 10 m vessels can sometimes be quite high, the impact of cod appears to be relatively insignificant. This, however, needs to be confirmed when under 10m vessels information is available for all countries involved.

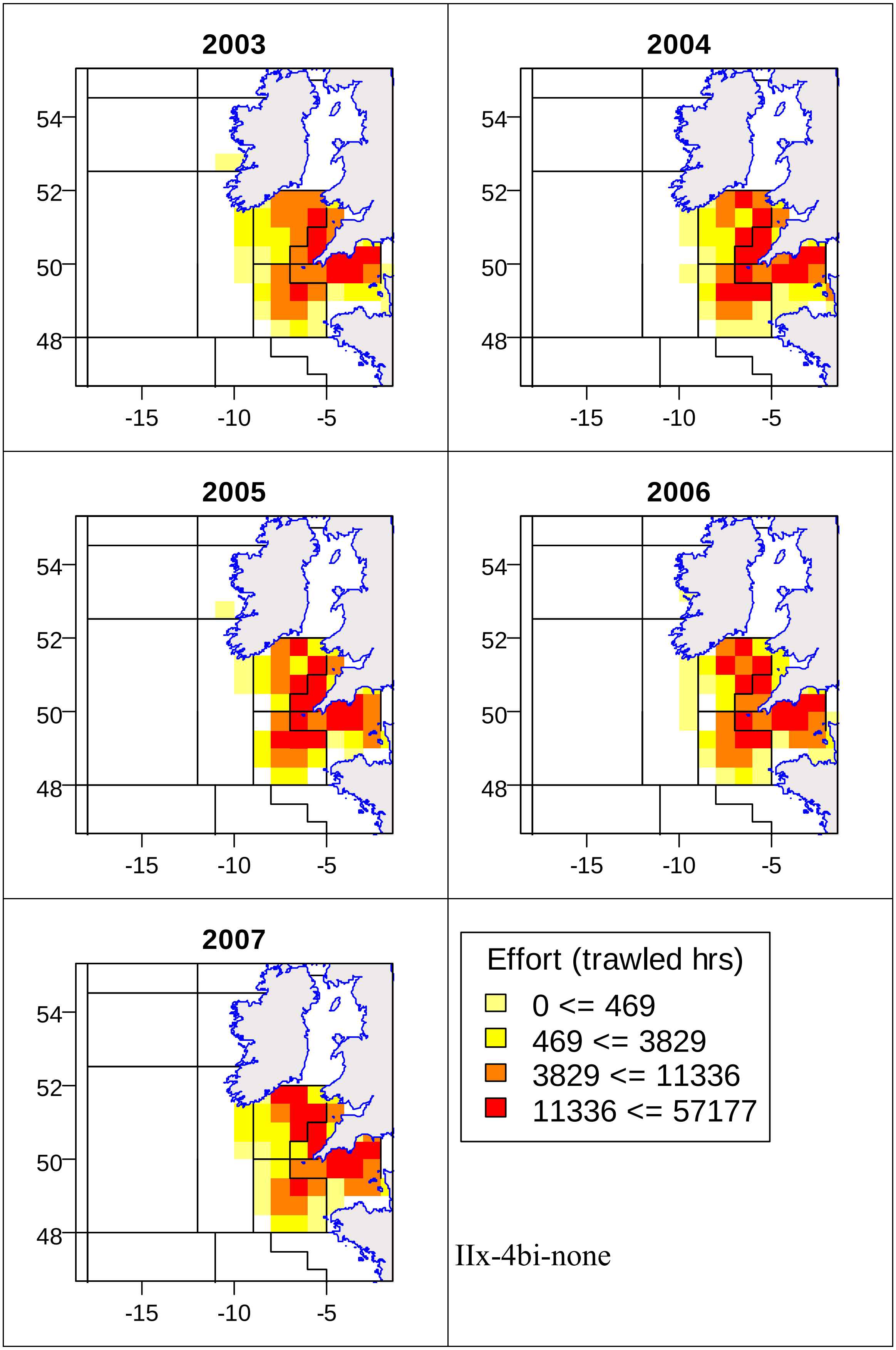
9.9. Spatial presentations

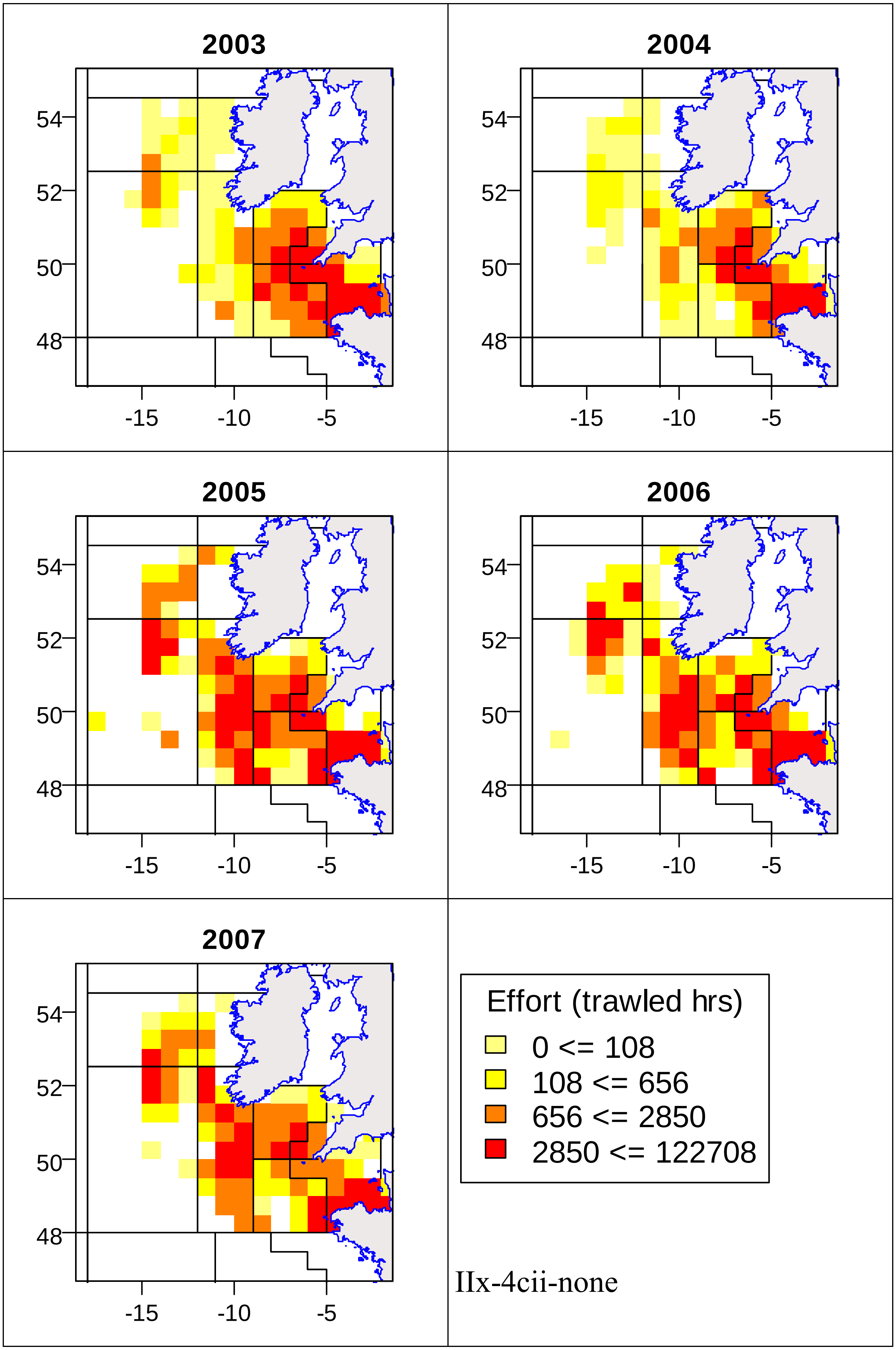
Figure 9.9.1. below shows the fishing effort (in hours fished) by ICES rectangle for 2003-2007 for the main gear/mesh-size categories. Note this is a continuos figure across several pages and that the for any given gear category, the scale applicable can be found in the table cell immediately to the right of the 2007 distribution plot

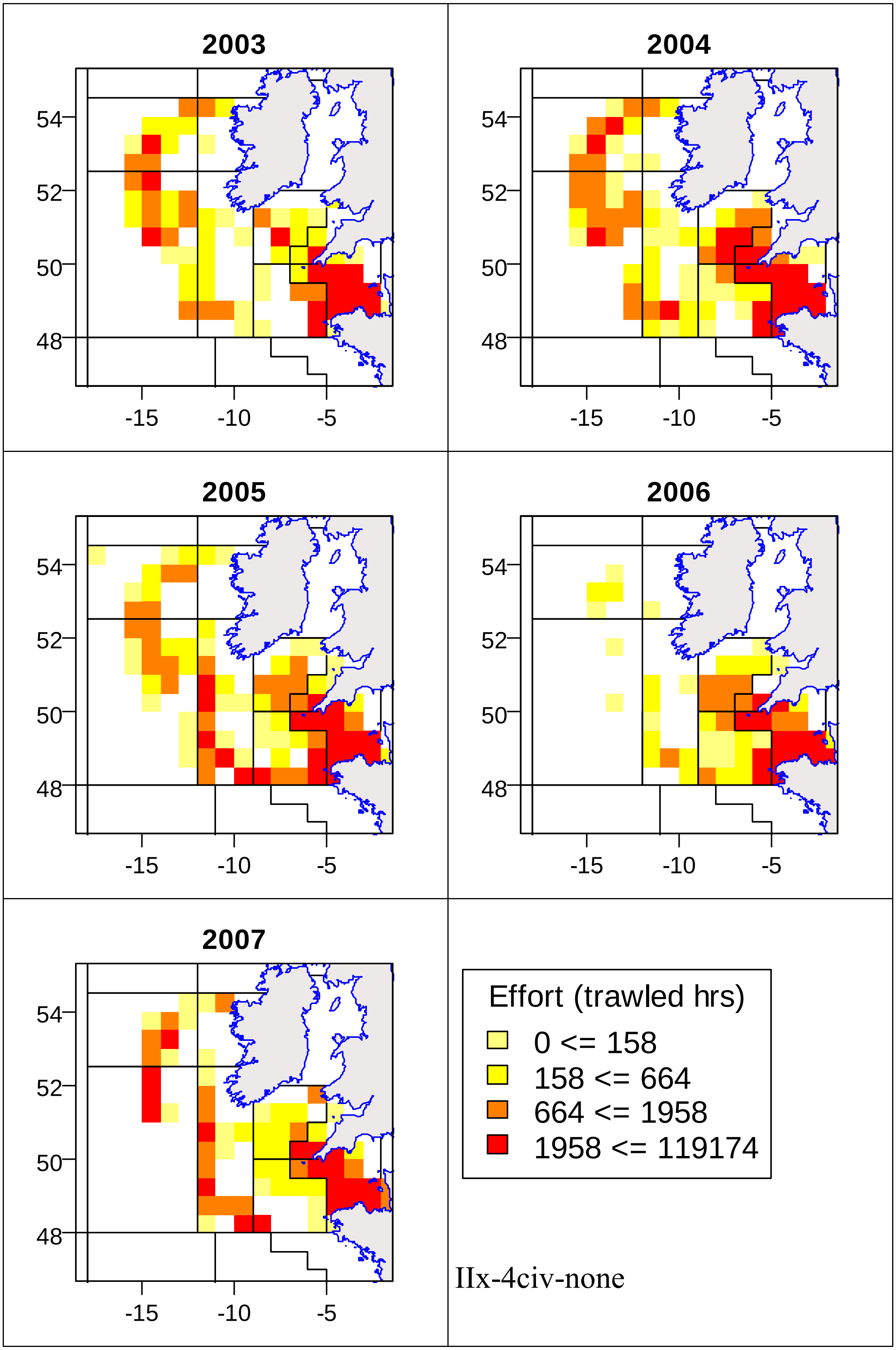


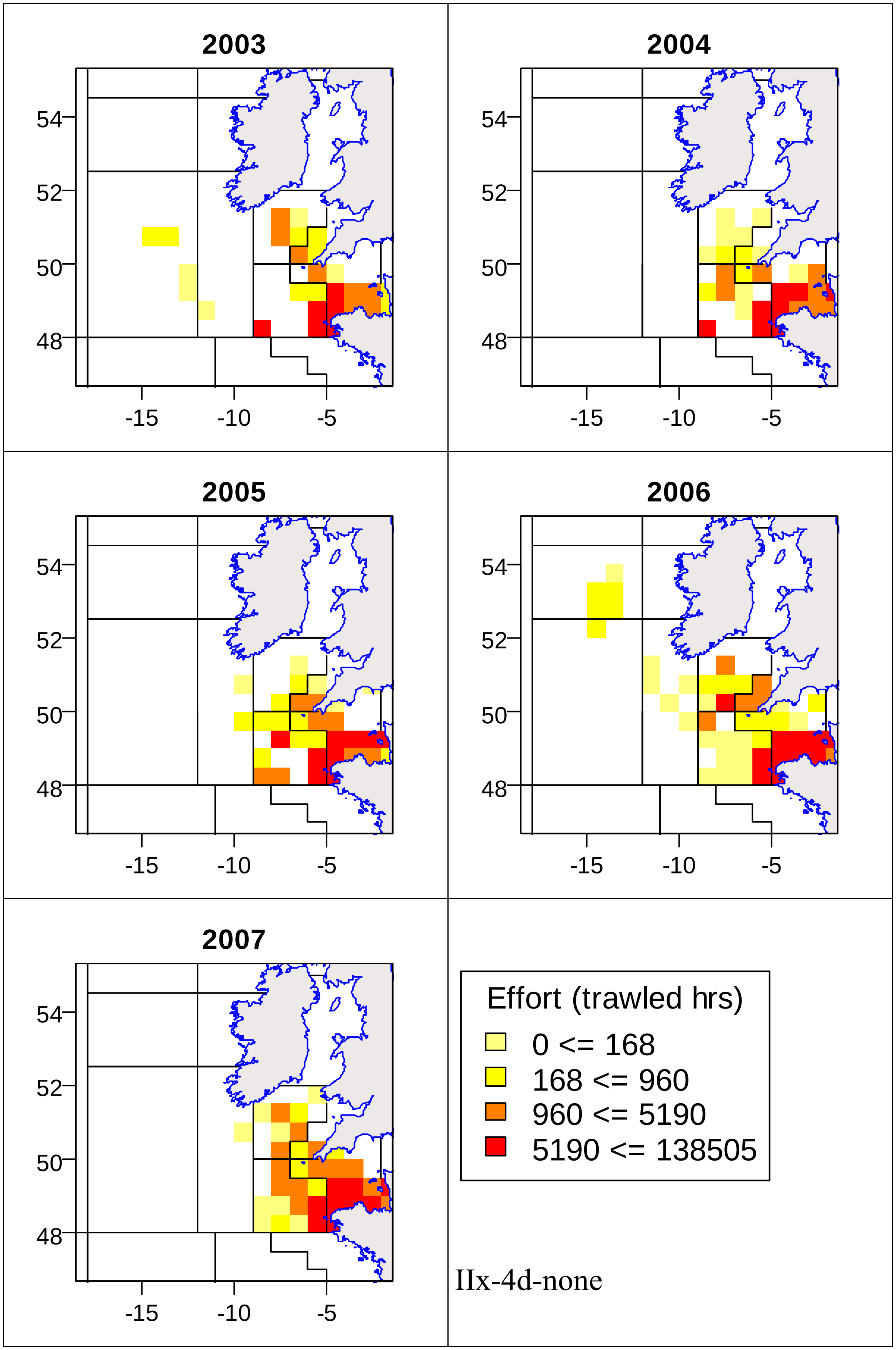
IIx-4aii-none

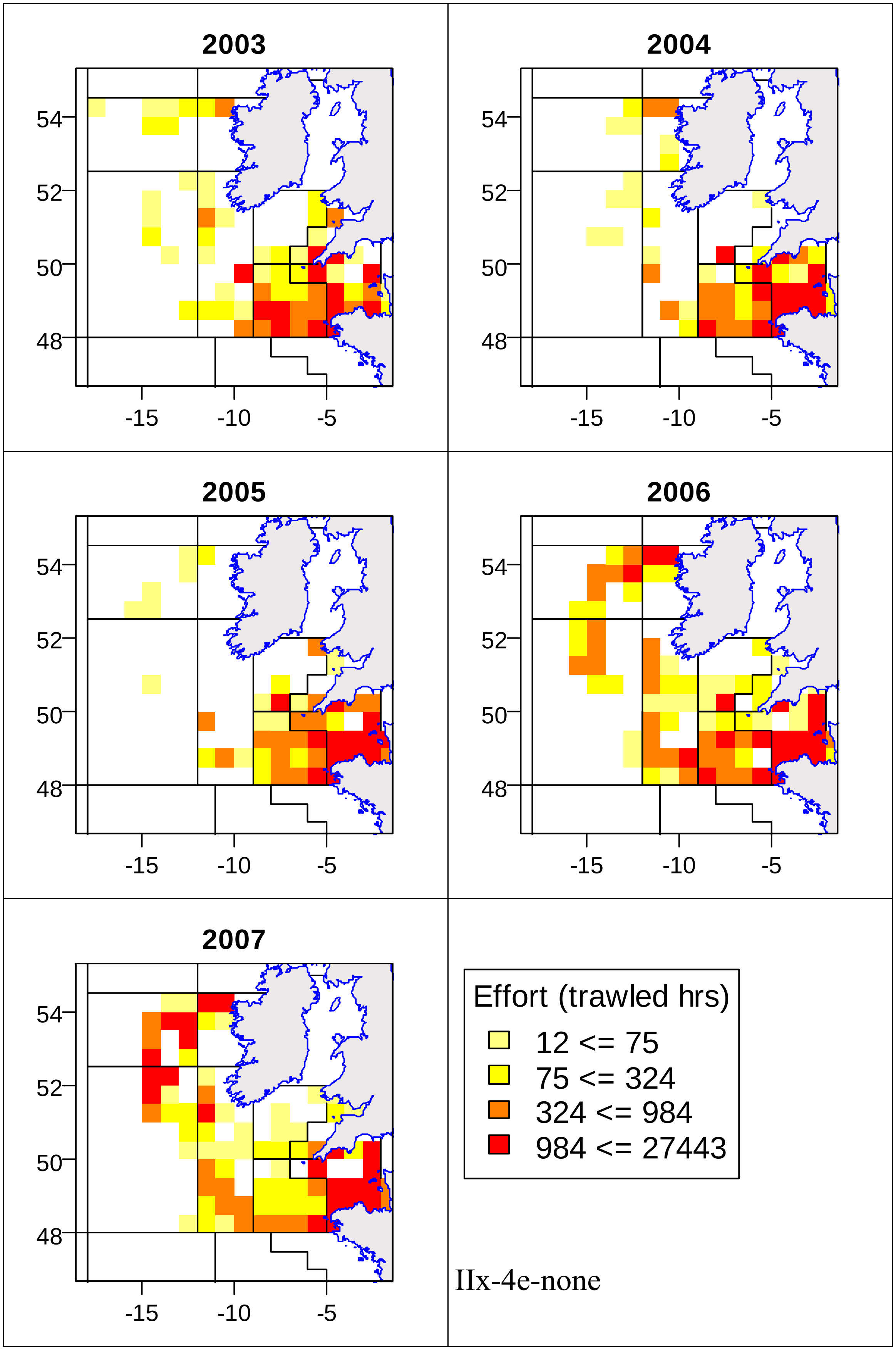

2003
2004
2005
2006
2007
54
52
50
48
-15
-10
-5
Effort (trawled hrs)
0 <= 545
545 <= 4104
4104 <= 13562
13562 <= 175681
IIx-4aiv-none


2003
2004
2005
2006
2007
54
52
50
48
-15
-10
-5
Effort (trawled hrs)
0 <= 469
469 <= 3829
3829 <= 11336
11336 <= 57177
IIx-4bi-none

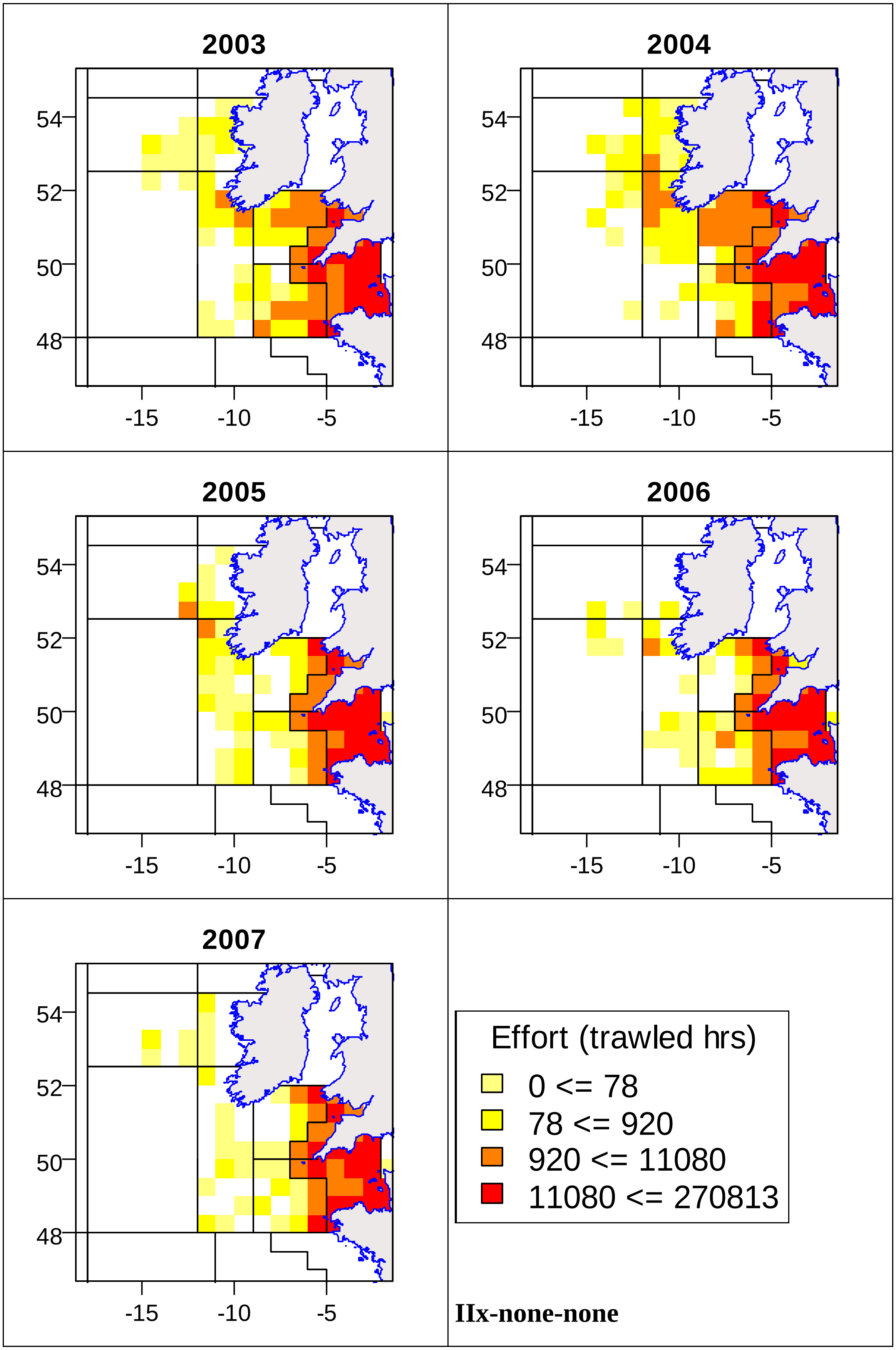

2003
2004
2005
2006
2007
54
52
50
48
-15
-10
-5
Effort (trawled hrs)
0 <= 108
108 <= 656
656 <= 2850
2850 <= 122708
IIx-4cii-none


2003
2004
2005
2006
2007
54
52
50
48
-15
-10
-5
Effort (trawled hrs)
0 <= 158
158 <= 664
664 <= 1958
1958 <= 119174
IIx-4civ-none


2003
2004
2005
2006
2007
54
52
50
48
-15
-10
-5
Effort (trawled hrs)
0 <= 168
168 <= 960
960 <= 5190
5190 <= 138505
IIx-4d-none


2003
2004
2005
2006
2007
54
52
50
48
-15
-10
-5
Effort (trawled hrs)
12 <= 75
75 <= 324
324 <= 984
984 <= 27443

IIx-4e-none


2003
2004
2005
2006
2007
54
52
50
48
-15
-10
-5
Effort (trawled hrs)
0 <= 78
78 <= 920
920 <= 11080
11080 <= 270813
IIx-none-none

9.10. Conclusion

In order to manage the Celtic Sea Cod stock using a scheme involving limits on effort, the limitations should be concentrated where their impact provides maximum benefit. In the light of this, ICES Divisions VIIbc is not considered since the Celtic Sea Cod stock covers Divisions VIIe-k only.

Given the importance of the Divisions VIIfg in term of cod catches, and the somewhat higher CPUE (actually LPUE) in that area, a concentration of the regulation in that area may be beneficial. However, the group was not able to consider other relevant data such as the distributions of spawning fish or whether parts of the wider Celtic Sea are important for juveniles. Observations of these factors would help to confirm whether or not management concentrated on a subset of the overall area would provide the necessary protection for the stock as a whole. It is likely that limitation of effort specific to the VIIfg area would benefit to the cod stock, and also to other species, even though there will be some shift of effort to adjacent areas, given the differences in CPUE.

It is important to note that, as for other areas covered by Annex IIa, some mesh size categories group together several fishing activities which in fact target different species. Therefore, the correspondence between the métier and the gear/mesh-size category may be not straightforward since the impact on cod may be very different. For instance, the *Nephrops* métier in the Celtic Sea may be part of mesh-size category 4aii for Irish vessels, while for France this metier is mostly represented within mesh-size category 4aiv.

The analysis made on the French bottom trawl metier shows, as an example, the relative impact on cod of the three metiers which use this 100-119mm mesh-size category (see Table 9.1):

- the metier targeting the benthic species, with 3% of cod in the landings in 2000-2003 and 1% in recent years (2004-2007),
- the one targeting the gadoids, with 15% of cod in the landings in 2000-2003 and 8% in recent years (2004-2007),
- the *Nephrops* metier, with 11% of cod in the landings in 2000-2003 and 7% in recent years (2004-2007)
-

Regarding the *Nephrops* métier, it is not clear from the available data, if cod is an actual by-catch of *Nephrops* or if, during a day, there is a succession of hauls targeting *Nephrops* without cod and some hauls (mainly during the night) targeting fish (with cod) without Nephrops, all of them being merged in the same Nephrops metier.

This analysis shows that limiting fishing effort for a vessel targeting the benthic species (anglerfish, megrim) may have practically no effect on the cod stock. However, this metier contributes significantly to the total fishing effort of the otter trawl in the Celtic Sea.

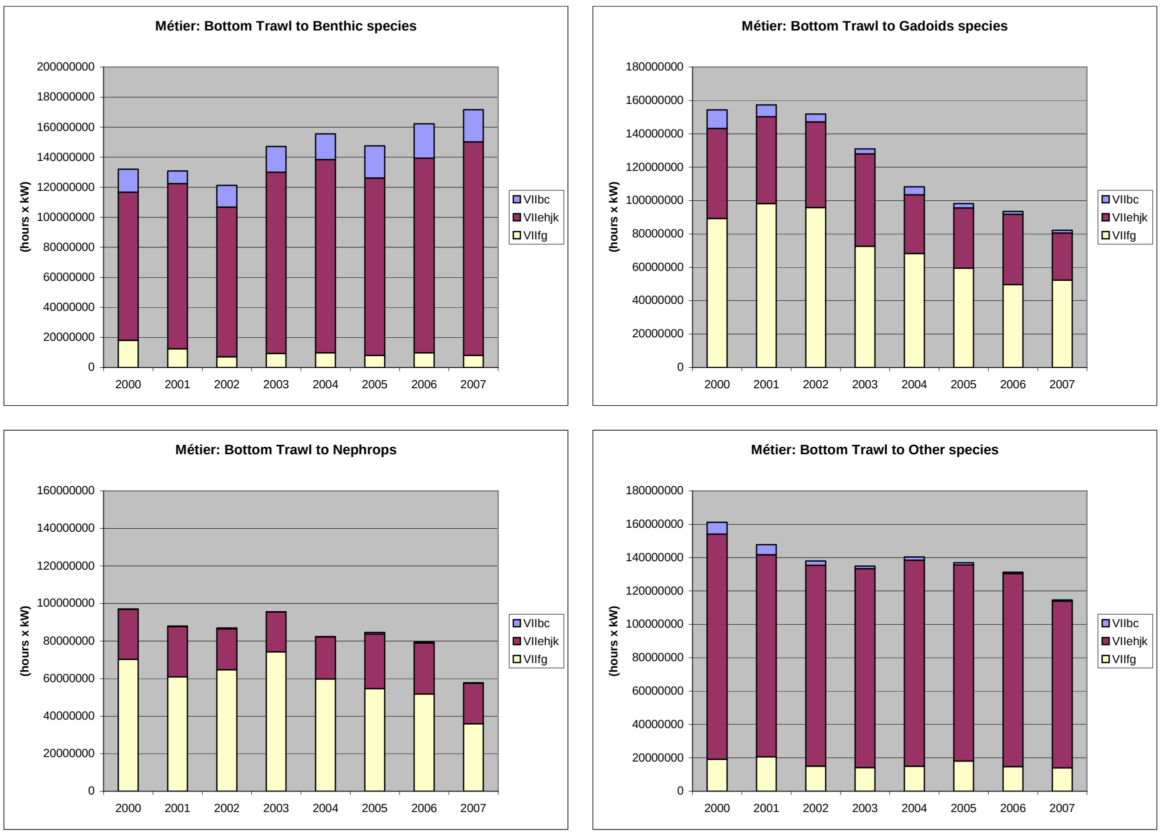
It should also be kept in mind that the relative contributions of each metier to the total effort vary substantially among area. For instance, the French analysis shows (Figure 9.10.1 to 9.10.3) that the so-called 'Benthic métier' predominantly occurs in Divisions VIIehjk but is not very apparent in VIIfg, where the gadoids metier dominates.

The definition of the 'effort groups' should take account of these metiers. This should help to maximise the impact of the regulated measures, while preventing unnecessary restrictions in metiers not contributing much to mortality of cod. However, the way the metiers have been presented (based on species percentages) may be difficult to use in a regulatory framework.

Given that the number of vessels may have increased, a first regulating measure could be to limit the access of the area.

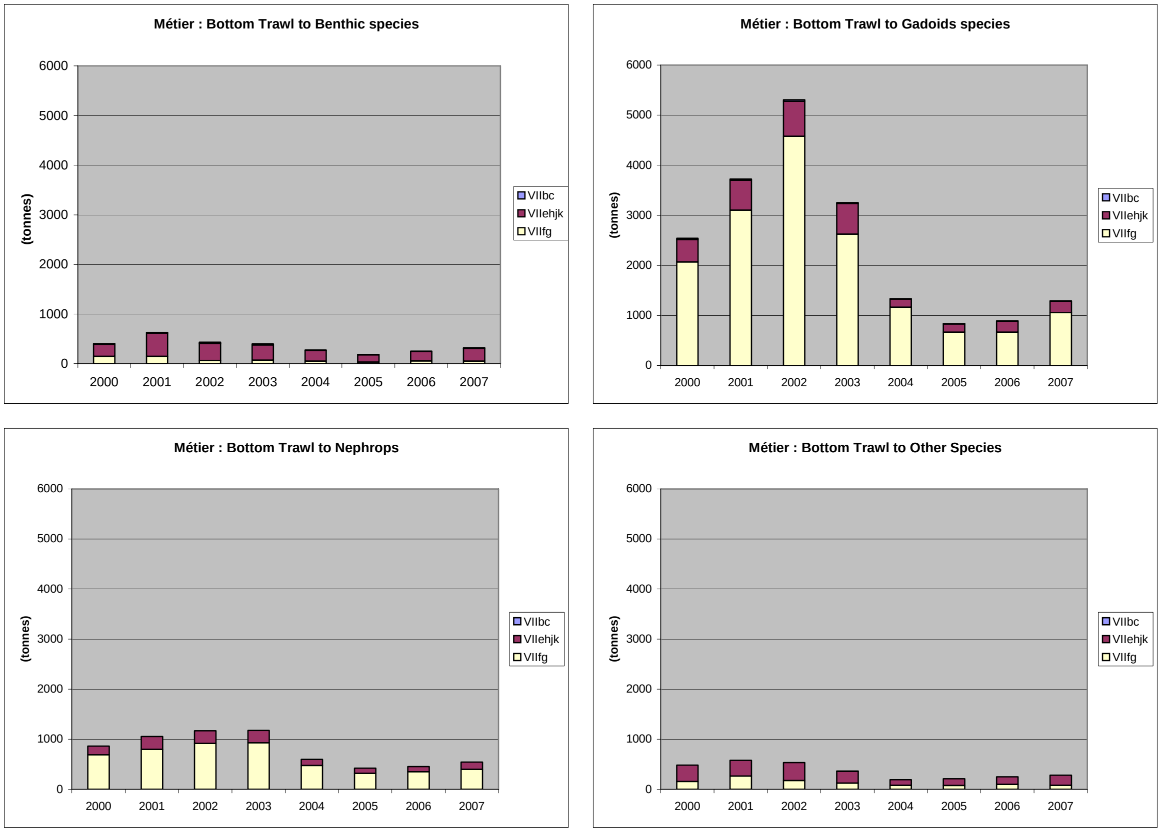
Finally, even though the static gears appear to have little impact on the cod stock (less than 100t), this has to be re-examined when under 10m vessels information will be available for all the countries involved.

Figure 9.10.1 shows the contribution of each metier in the VIIfg area for the French bottom trawlers. Figures 9.10.2 and 9.10.3. show the French fishing effort and the cod landings by metier and by area. This example highlights the fact that cod is mostly landed in Divisions VIIfg by the gadoid métier.



(2007 preliminary)

Figure 9.10.1. French effort in ICES divisions VIIbc, VIIhjk and VIIfg by metier for 2000-2007



(2007 preliminary)

Figure 9.10.2. French landings of cod in ICES divisions VIIbc, VIIhjk and VIIfg by metier for 2000-2007

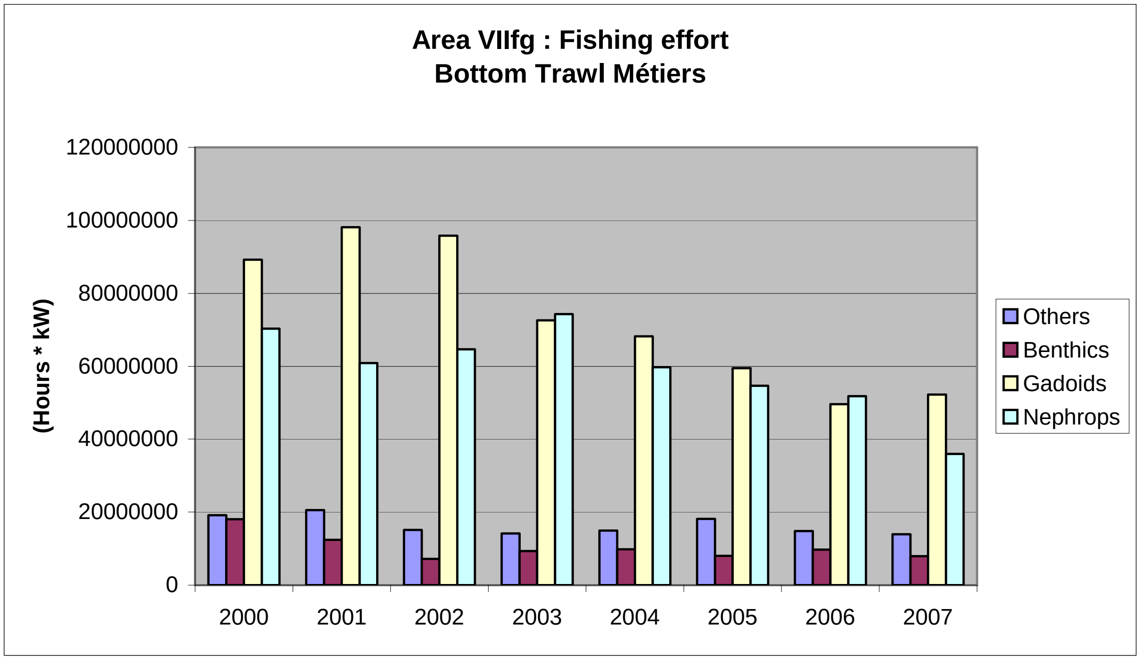


Figure 9.10.3. French effort in ICES divisions VIIfg by metier for 2000-2007

Appendix 1: French raw data from DRC Program : Cod landings and discards

Table 1 : French raw data from DRC Program : Cod landings and discards

Year	Ices division	Data type	Benthic bottom trawl	Crustacean bottom trawl	Demersal bottom trawl	Deep sea bottom trawl	Pots	Beam trawl	Nets	Anchovy pelagic trawl	Miscellaneous fishes pélagic trawl	Pilchard pelagic trawl	Albacore pelagic trawl
2003	IVa	Haul Number or pieces of net			14								
		Mean Cod landings by haul			0								
		Mean Cod discards by haul			0								
	IVc	Haul Number or pieces of net			24			3	33				
		Mean Cod landings by haul			11.5358			1.283	5.438				
		Mean Cod discards by haul			0.0548			0	0.318				
	VIa	Haul Number or pieces of net			3								
		Mean Cod landings by haul			0								
		Mean Cod discards by haul			0								
	VIId	Haul Number or pieces of net	28		128			23	68		1		
		Mean Cod landings by haul	0		11.8548			1.029	2.839		4.467999935		
		Mean Cod discards by haul	0		0			0	0.03		0		
	VIIe	Haul Number or pieces of net			37								
		Mean Cod landings by haul			8.09459								
		Mean Cod discards by haul			0								
	VIIh	Haul Number or pieces of net							17				
		Mean Cod landings by haul							0.455				
		Mean Cod discards by haul							0				
	VIIIa	Haul Number or pieces of net	30	143	39				61				
		Mean Cod landings by haul	0	0	0				0				
		Mean Cod discards by haul	0	0	0				1.124				
	VIIIb	Haul Number or pieces of net	31	17	23				28				
		Mean Cod landings by haul	0	0	0				0				
		Mean Cod discards by haul	0	0	0				0				
2004	IIa	Haul Number or pieces of net			1	6							
		Mean Cod landings by haul			0	0							
		Mean Cod discards by haul			1	0							
	IVa	Haul Number or pieces of net			44								
		Mean Cod landings by haul			0								
		Mean Cod discards by haul			1.95795								
	IVb	Haul Number or pieces of net			1								
		Mean Cod landings by haul			0								
		Mean Cod discards by haul			0								
	IVc	Haul Number or pieces of net			57				6				
		Mean Cod landings by haul			35.7513				2.145				
		Mean Cod discards by haul			3.42025				0				
	Vb	Haul Number or pieces of net			8	6							
		Mean Cod landings by haul			0	0							
		Mean Cod discards by haul			0	0							
	VIa	Haul Number or pieces of net	4		1	167							
		Mean Cod landings by haul	0		0	0							
		Mean Cod discards by haul	0		0	0							
	VIb	Haul Number or pieces of net				45							
		Mean Cod landings by haul				0							
		Mean Cod discards by haul				0							
	VIIb	Haul Number or pieces of net				2							
		Mean Cod landings by haul				0							
		Mean Cod discards by haul				0							
	VIIc	Haul Number or pieces of net				6							
		Mean Cod landings by haul				0							
		Mean Cod discards by haul				0							
	VIId	Haul Number or pieces of net	23		262			7	47		9		
		Mean Cod landings by haul	1.15385		6.87751			0	5.18		1.5		
		Mean Cod discards by haul	0.52		0.02857			0	0.133		0		
	VIIe	Haul Number or pieces of net			12		3		34				
		Mean Cod landings by haul			0.78333		0		0.179				
		Mean Cod discards by haul			0.08333		0		0.714				
	VIIf	Haul Number or pieces of net			4								
		Mean Cod landings by haul			2.4								
		Mean Cod discards by haul			0								
	VIIg	Haul Number or pieces of net		20	56								
		Mean Cod landings by haul		4.425	19.3023								
		Mean Cod discards by haul		0	0.59318								
	VIIh	Haul Number or pieces of net	86	38	17				8				
		Mean Cod landings by haul	1.94186	4.078947	7.77879				0				
		Mean Cod discards by haul	0	0	0.13636				0				
	VIIIa	Haul Number or pieces of net	33	125	36	8			162				
		Mean Cod landings by haul	0	0	0	0			0				
		Mean Cod discards by haul	0	0	0	0			0.073				
	VIIIb	Haul Number or pieces of net	15	8	4				32				
		Mean Cod landings by haul	0	0	0				0				
		Mean Cod discards by haul	0	0	0				0				
	VIIId	Haul Number or pieces of net	1			1							
		Mean Cod landings by haul	12			0							
		Mean Cod discards by haul	0			0							
	VIIj	Haul Number or pieces of net			8	52							
		Mean Cod landings by haul			3.6875	0							
		Mean Cod discards by haul			0.325	0							
	VIIk	Haul Number or pieces of net				12							
		Mean Cod landings by haul				0							
		Mean Cod discards by haul				0							

Table 1 : French raw data from DRC Program : Cod landings and discards (continued)

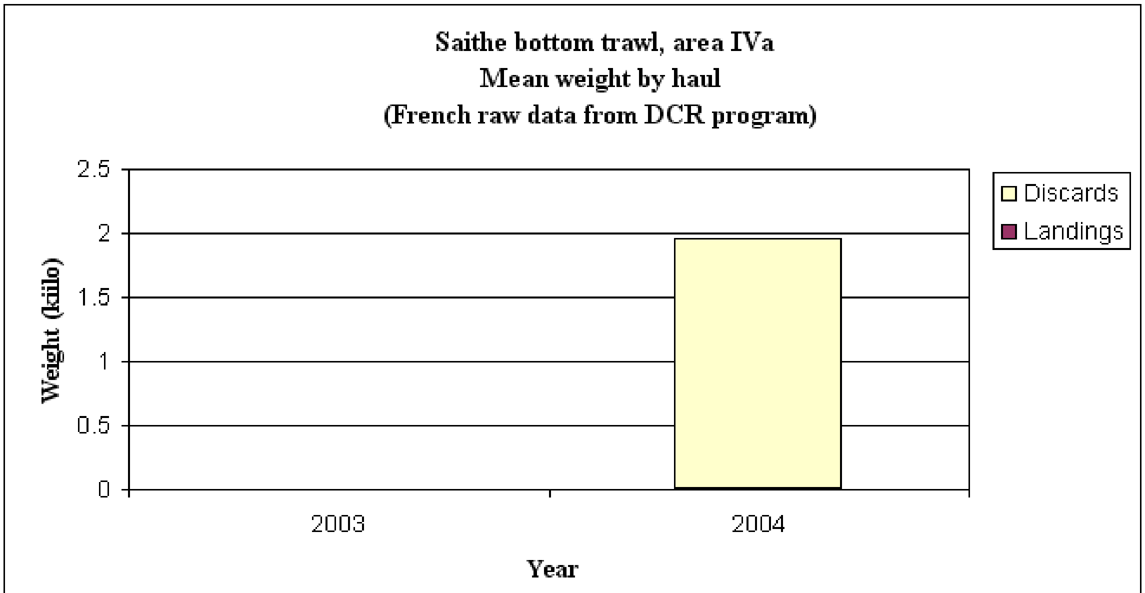
Year	Ices division	Data type	Benthic bottom trawl	Crustacean bottom trawl	Demersal bottom trawl	Deep sea bottom trawl	Pots	Beam trawl	Nets	Anchovy pelagic trawl	Miscellaneous fishes pélagic trawl	Pilchard pelagic trawl	Albacore pelagic trawl
2005	IVb	Haul Number or pieces of net			25								
		Mean Cod landings by haul			2.72								
		Mean Cod discards by haul			1.92								
	IVc	Haul Number or pieces of net			36				10				
		Mean Cod landings by haul			2.35938				0				
		Mean Cod discards by haul			0.67188				0.06				
	Vb	Haul Number or pieces of net				2							
		Mean Cod landings by haul				0							
		Mean Cod discards by haul				0							
	VIa	Haul Number or pieces of net	1		9	135							
		Mean Cod landings by haul	0		0	0							
		Mean Cod discards by haul	0		0	0							
	VIb	Haul Number or pieces of net				5							
		Mean Cod landings by haul				0							
		Mean Cod discards by haul				0							
	VIIa	Haul Number or pieces of net	14										
		Mean Cod landings by haul	10.1385										
		Mean Cod discards by haul	1.59231										
	VIId	Haul Number or pieces of net	56		186			20	46		8		
		Mean Cod landings by haul	0.844		1.75481			0	425.4		0		
		Mean Cod discards by haul	0.048		0			0	0.13		0		
	VIIe	Haul Number or pieces of net			25			6	6				
		Mean Cod landings by haul			0.576			0	0				
		Mean Cod discards by haul			0			0	0				
	VIIf	Haul Number or pieces of net			4								
		Mean Cod landings by haul			0								
		Mean Cod discards by haul			0								
	VIIg	Haul Number or pieces of net	100	251	63								
		Mean Cod landings by haul	12.8048	25.02116	41.2132								
		Mean Cod discards by haul	1.89416	4.199957	2.31059								
	VIIh	Haul Number or pieces of net	106	21		8							
		Mean Cod landings by haul	5.02877	15.25		0							
		Mean Cod discards by haul	0.29292	0.6		0							
	VIIIa	Haul Number or pieces of net	57	172	174				107				
		Mean Cod landings by haul	0	0	0				0				
		Mean Cod discards by haul	0	0	0				0				
	VIIIb	Haul Number or pieces of net	30	30	46								
		Mean Cod landings by haul	0	0	0								
		Mean Cod discards by haul	0	0	0								
	VIIId	Haul Number or pieces of net	1			2							
		Mean Cod landings by haul	0			0							
		Mean Cod discards by haul	0			0							
	VIIj	Haul Number or pieces of net	78	10	10								
		Mean Cod landings by haul	4.1137	0	6.2707								
		Mean Cod discards by haul	0	0	0.64052								
	VIIk	Haul Number or pieces of net		57									
		Mean Cod landings by haul		0									
		Mean Cod discards by haul		0									
2006	IVb	Haul Number or pieces of net			28								
		Mean Cod landings by haul			0								
		Mean Cod discards by haul			0.025								
	IVc	Haul Number or pieces of net			51						5		
		Mean Cod landings by haul			23.6226						0		
		Mean Cod discards by haul			2.75806						0		
	Vb	Haul Number or pieces of net				1							
		Mean Cod landings by haul				0							
		Mean Cod discards by haul				0							
	VIa	Haul Number or pieces of net	10		2	38							
		Mean Cod landings by haul	0		0	0							
		Mean Cod discards by haul	0		0	0							
	VIb	Haul Number or pieces of net			11	12							
		Mean Cod landings by haul			0	0							
		Mean Cod discards by haul			0	0							
	VIIa	Haul Number or pieces of net	9			1							
		Mean Cod landings by haul	3.875			0							
		Mean Cod discards by haul	2.875			0							
	VIId	Haul Number or pieces of net	26		98				14		6		
		Mean Cod landings by haul	0		0.30502				0		0		
		Mean Cod discards by haul	0		0.8				0		0		
	VIIe	Haul Number or pieces of net	1		76				22		3		1
		Mean Cod landings by haul	0		10.2076				0.395		0		0
		Mean Cod discards by haul	0		2.31876				0.799		0		0
	VIIf	Haul Number or pieces of net	3		28								
		Haul Number or pieces of net	23.3333		32.6611								
		Mean Cod discards by haul	0.3		6.94889								
	VIIg	Haul Number or pieces of net	68	112	125								
		Mean Cod landings by haul	27.2912	29.11386	52.0142								
		Mean Cod discards by haul	4.78947	1.921383	3.83562								
	VIIh	Haul Number or pieces of net	86	13	3	27							
		Mean Cod landings by haul	4.19675	23.25476	2.66667	0							
		Mean Cod discards by haul	0	0.514286	0	0							
	VIIIa	Haul Number or pieces of net	69	99	151				150		24		11
		Mean Cod landings by haul	0.27222	0	0				0		0		0
		Mean Cod discards by haul	0	0	0				0		0		0
	VIIIb	Haul Number or pieces of net	2		22		1		123		1		39
		Mean Cod landings by haul	0		0		0		0.017		0		0
		Mean Cod discards by haul	0		0		0		0		0		0
	VIIIc	Haul Number or pieces of net							1				16
		Mean Cod landings by haul							0				0
		Haul Number or pieces of net							0				0
	VIIId	Haul Number or pieces of net	22										88
		Mean Cod landings by haul	0										0
		Mean Cod discards by haul	0										0
	VIIIe	Haul Number or pieces of net							1				
		Mean Cod landings by haul							0				
		Mean Cod discards by haul							0				
	VIIj	Haul Number or pieces of net	4		4	32							1
		Mean Cod landings by haul	12		10.075	0							0
		Mean Cod discards by haul	0.625		0	0							0

Table 1 : French raw data from DRC Program : Cod landings and discards (continued)

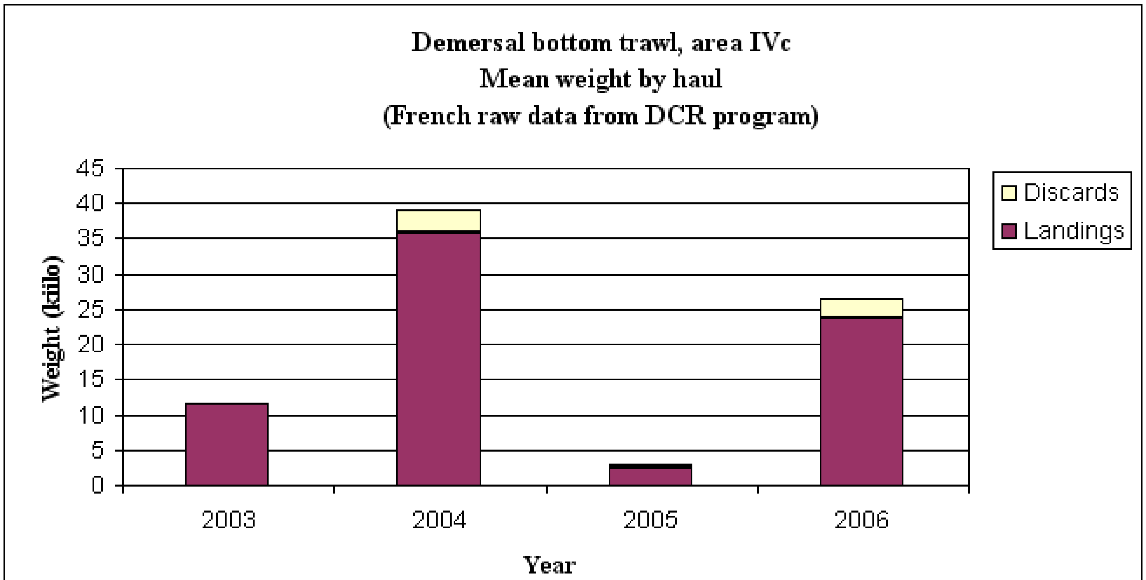
Year	Ices division	Data type	Benthic bottom trawl	Crustacean bottom trawl	Demersal bottom trawl	Deep sea bottom trawl	Pots	Beam trawl	Nets	Anchovy pelagic trawl	Miscellaneous fishes pélagic trawl	Pilchard pelagic trawl	Albacore pelagic trawl
2007	VIId	Haul Number or pieces of net	83		141				23		42		
		Mean Cod landings by haul	0.88542		10.3868				14.97		146.0896668		
		Mean Cod discards by haul	0		0.10833				1.249		0.172444452		
	VIIe	Haul Number or pieces of net	2		25				150		154		2
		Mean Cod landings by haul	0.32562		0.56111				1.163		0		0
		Mean Cod discards by haul	0		0				0.161		0		0
	VIIf	Haul Number or pieces of net							15				
		Mean Cod landings by haul							0.922				
		Mean Cod discards by haul							0.52				
	VIIg	Haul Number or pieces of net		41									
		Mean Cod landings by haul		4.037073									
		Mean Cod discards by haul		0.378143									
	VIIh	Haul Number or pieces of net	164		47				2		7		
		Mean Cod landings by haul	2.00516		1.05319				0		0		
		Mean Cod discards by haul	0.03077		0				0		0		
	VIIIa	Haul Number or pieces of net	179	97	147				986	27	103		3
		Mean Cod landings by haul	0.38108	0.053453	0.16696				0.09	0	0		0
		Mean Cod discards by haul	0.01905	0	0				0.001	0	0		0
	VIIIb	Haul Number or pieces of net	5	2	16				427	168	107		4
		Mean Cod landings by haul	0	0	0				0.009	0	0		0
		Mean Cod discards by haul	0	0	0				0.009	0	0		0
	VIIIc	Haul Number or pieces of net							7	3	4	1	18
		Mean Cod landings by haul							0	0	0	0	0
		Mean Cod discards by haul							0	0	0	0	0
	VIIId	Haul Number or pieces of net	41						2	14			82
		Mean Cod landings by haul	0						0	0			0
		Mean Cod discards by haul	0						0	0			0
	VIIIe	Haul Number or pieces of net											1
		Mean Cod landings by haul											0
		Mean Cod discards by haul											0
	VIIj	Haul Number or pieces of net	9										19
		Mean Cod landings by haul	0										0
		Mean Cod discards by haul	0										0
	VIIk	Haul Number or pieces of net											27
		Mean Cod landings by haul											0
		Mean Cod discards by haul											0
2008	VIId	Haul Number or pieces of net									10		
		Mean Cod landings by haul									0		
		Mean Cod discards by haul									0		
	VIIe	Haul Number or pieces of net			5				6		17		
		Mean Cod landings by haul			0				0		0		
		Mean Cod discards by haul			0				0		0		
	VIIg	Haul Number or pieces of net		27									
		Mean Cod landings by haul		21.85185									
		Mean Cod discards by haul		0.05463									
	VIIh	Haul Number or pieces of net	12										
		Mean Cod landings by haul	0.33167										
		Mean Cod discards by haul	0										
	VIIIa	Haul Number or pieces of net	11	24					105		10		
		Mean Cod landings by haul	0	0					0.045		0		
		Mean Cod discards by haul	0	0					0		0		
	VIIIb	Haul Number or pieces of net							190		40		
		Mean Cod landings by haul							0		0		
		Mean Cod discards by haul							0		0		
	VIIIc	Haul Number or pieces of net									4		
		Mean Cod landings by haul									0		
		Mean Cod discards by haul									0		
	VIIId	Haul Number or pieces of net	2								2		
		Mean Cod landings by haul	0								0		
		Mean Cod discards by haul	0								0		

Figure 1 French raw data from DRC Program

Cod landings and discards

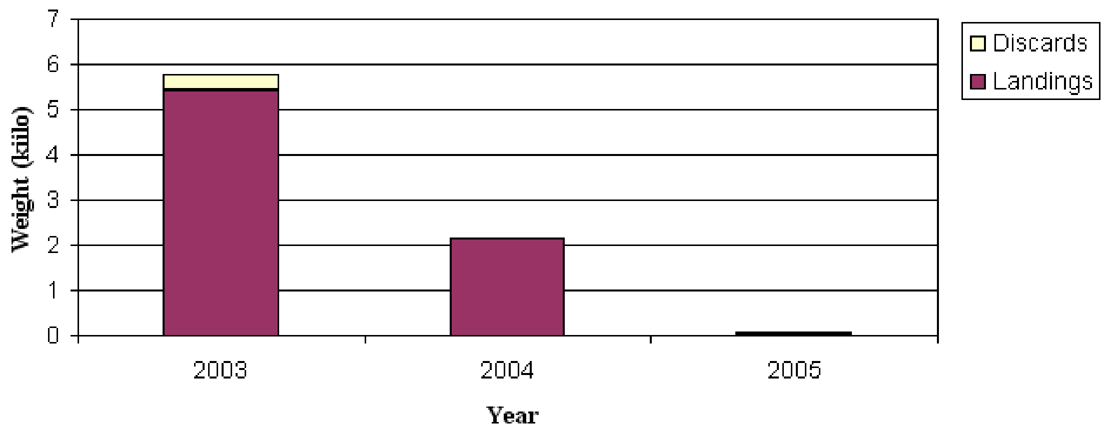


Year	2003	2004
Haul number	14	44



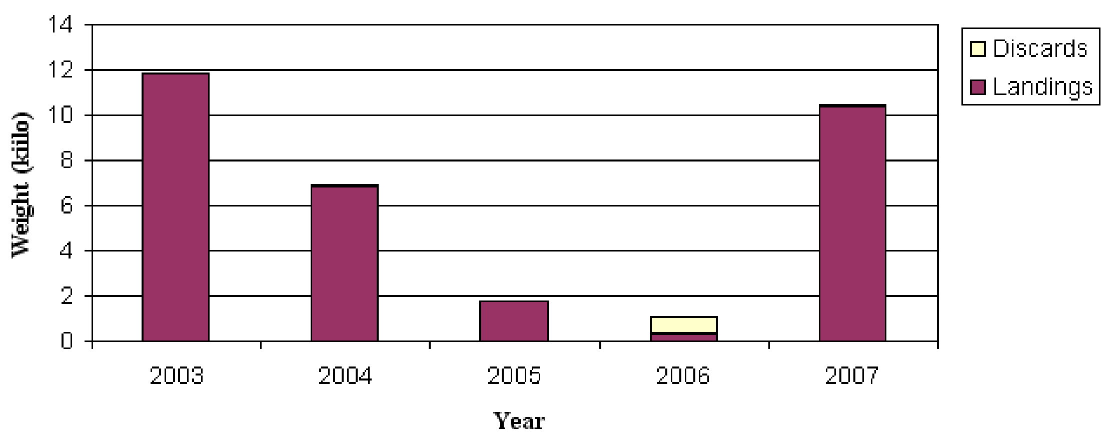
Year	2003	2004	2005	2006
Haul number	24	57	36	51

Nets, area IVc
Mean weight by haul
(French raw data from DCR program)

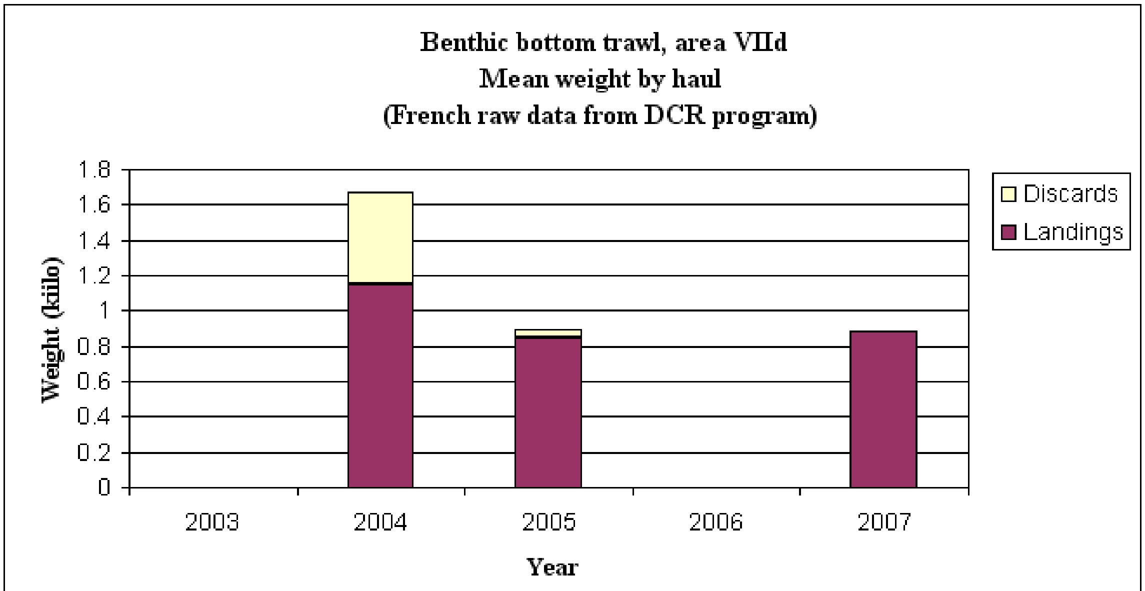


Year	2003	2004	2005
Pieces of net	33	6	10

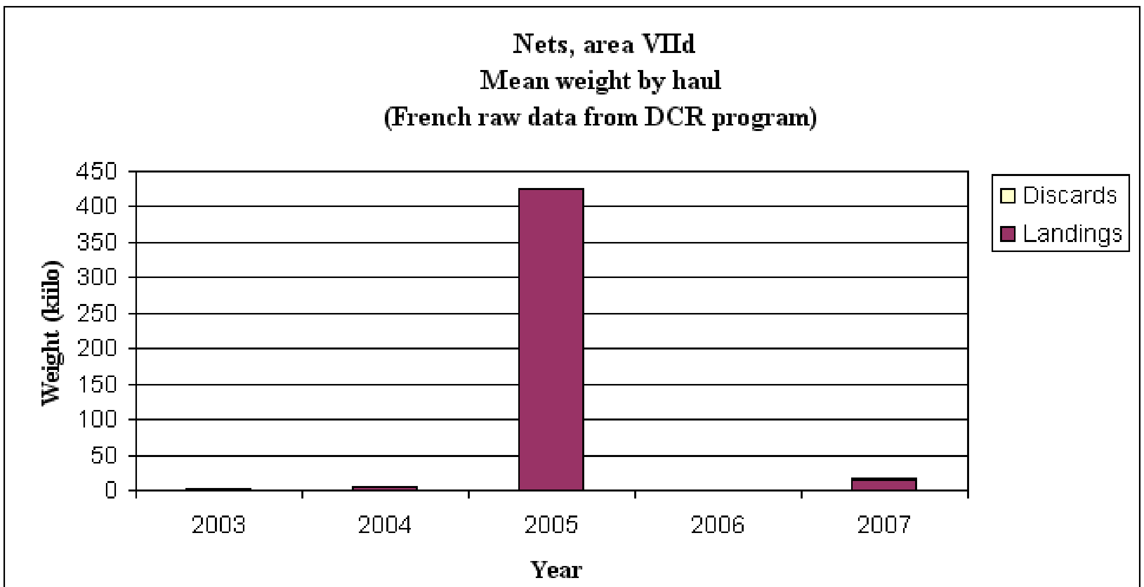
Demersal bottom trawl, area VIId
Mean weight by haul
(French raw data from DCR program)



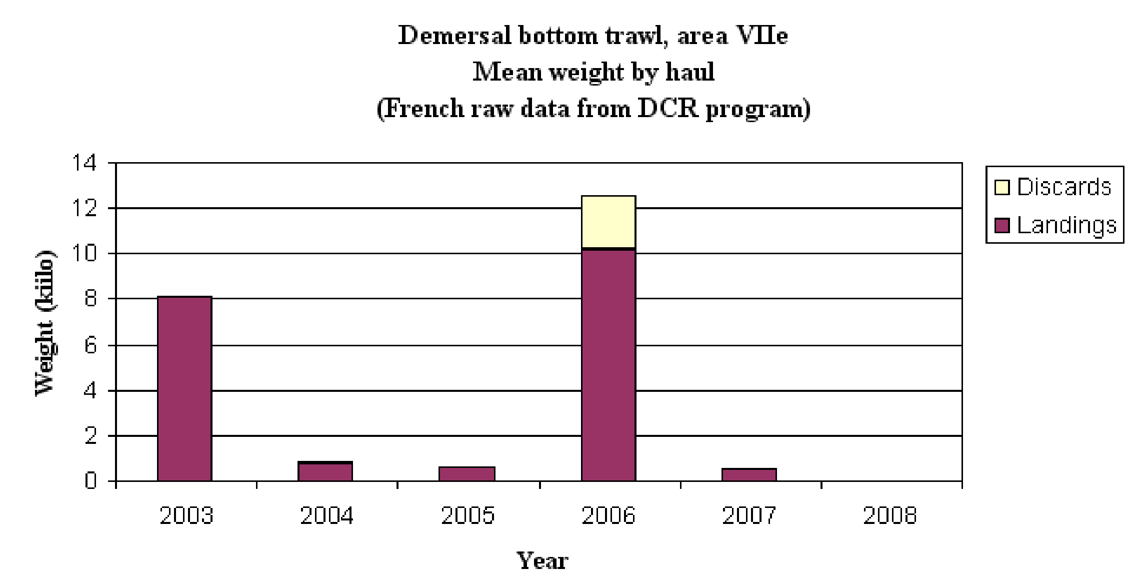
Year	2003	2004	2005	2006	2007
Haul number	128	262	186	98	141



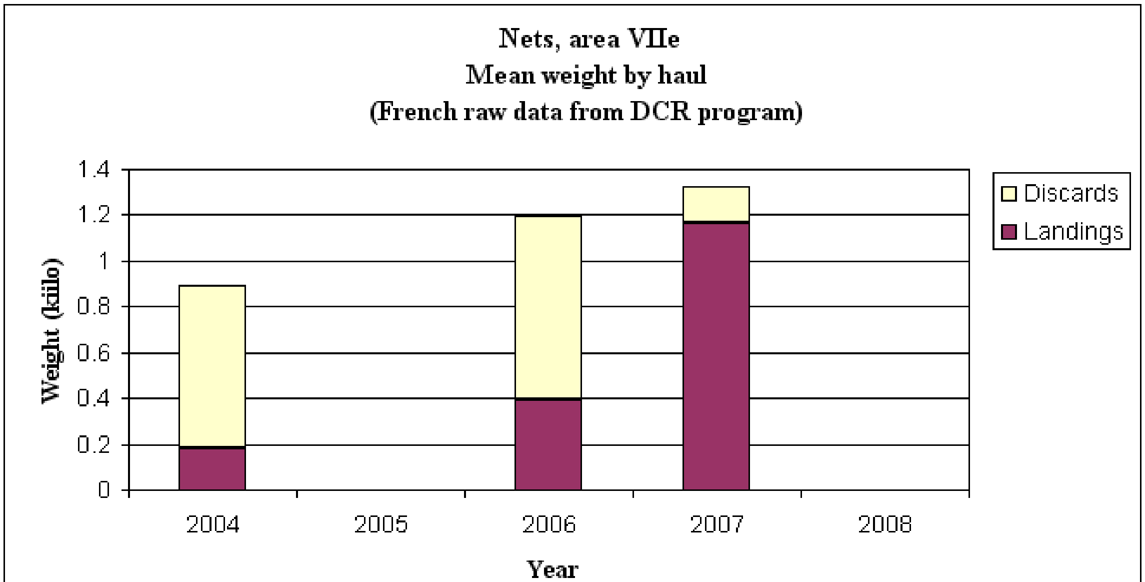
Year	2003	2004	2005	2006	2007
Haul number	28	23	56	26	83



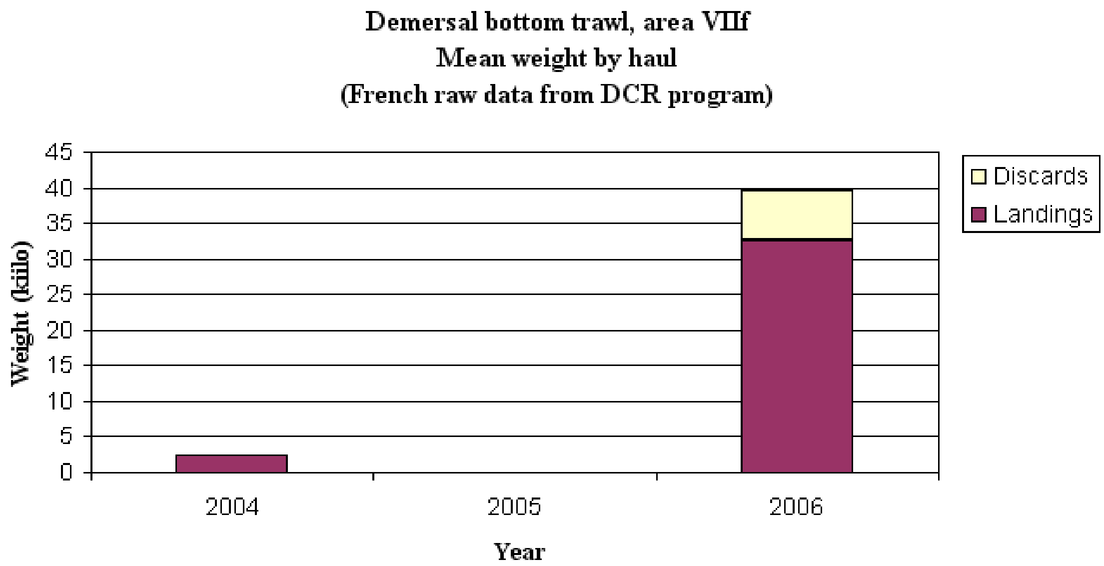
Year	2003	2004	2005	2006	2007
Pieces of net	68	47	46	14	23



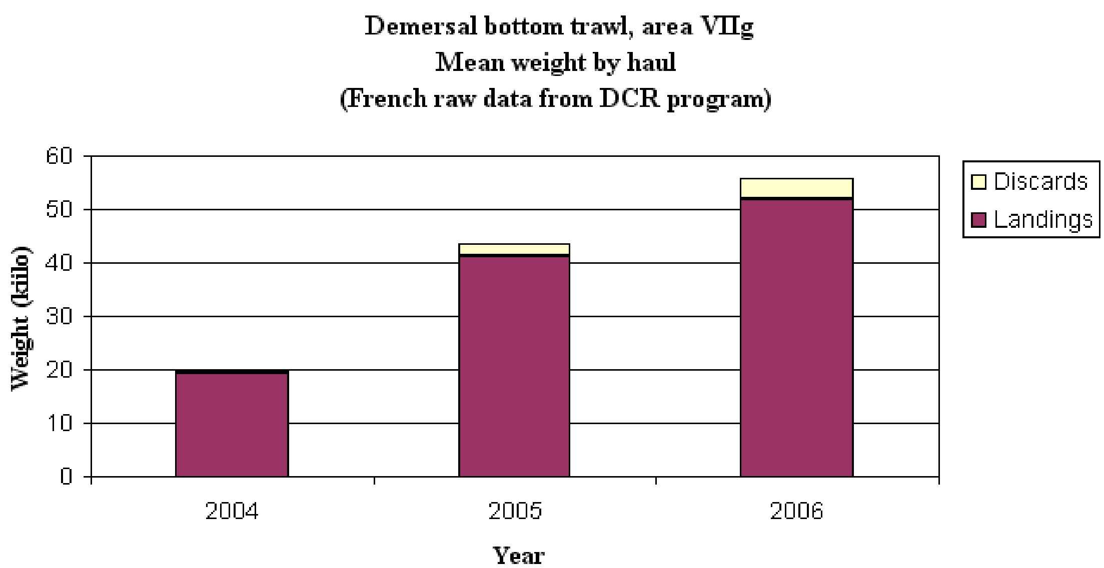
Year	2003	2004	2005	2006	2007	2008
Haul number	37	12	25	76	25	5



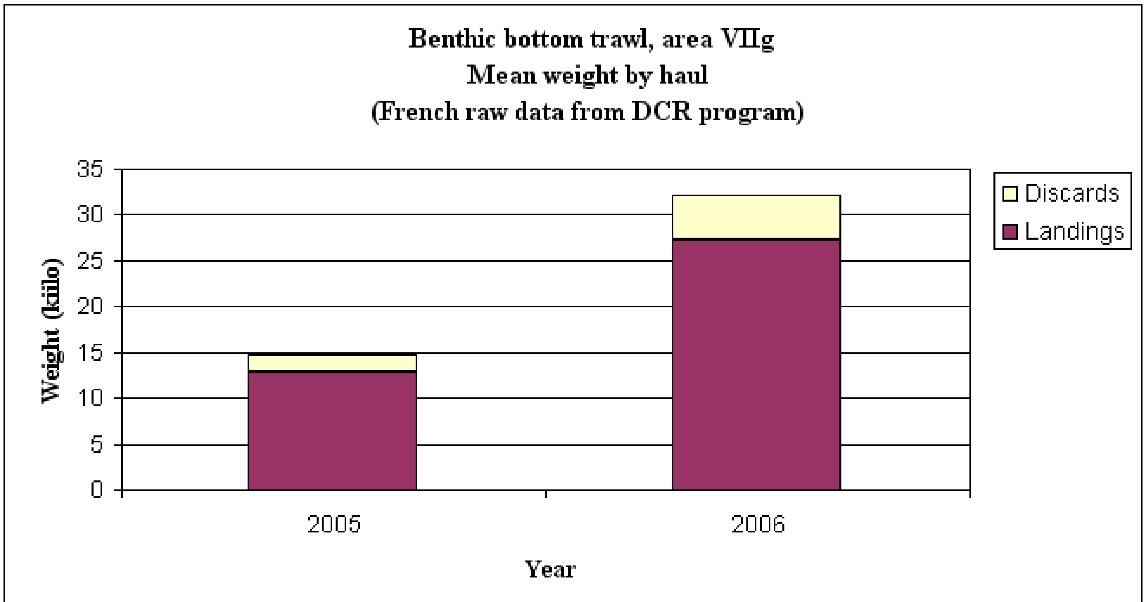
Year	2004	2005	2006	2007	2008
Pieces of net	34	6	22	150	6



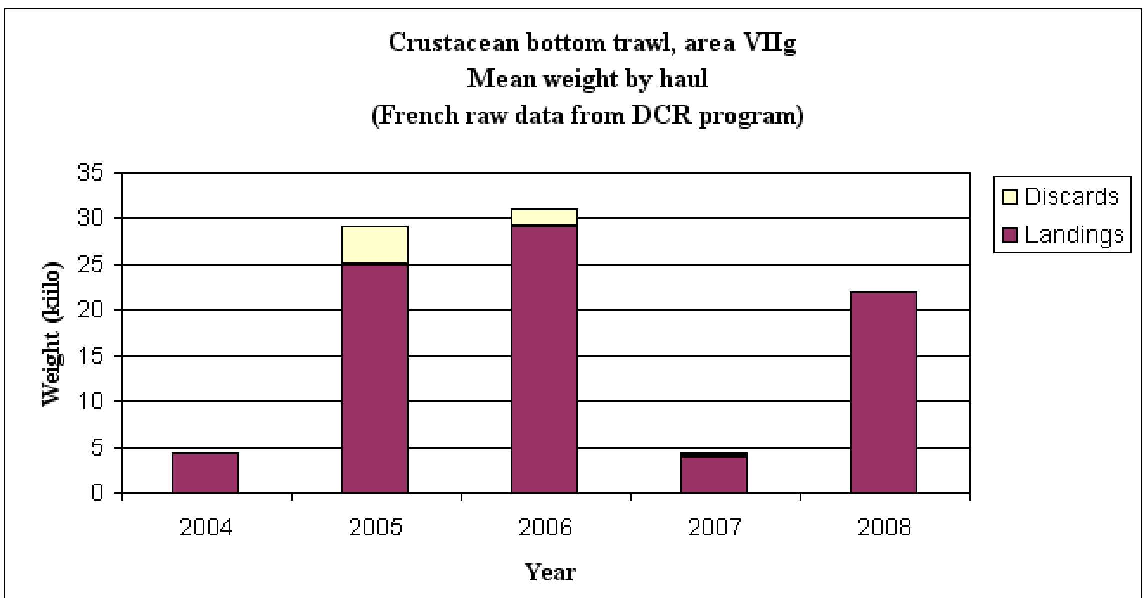
Year	2004	2005	2006
Haul number	4	4	28



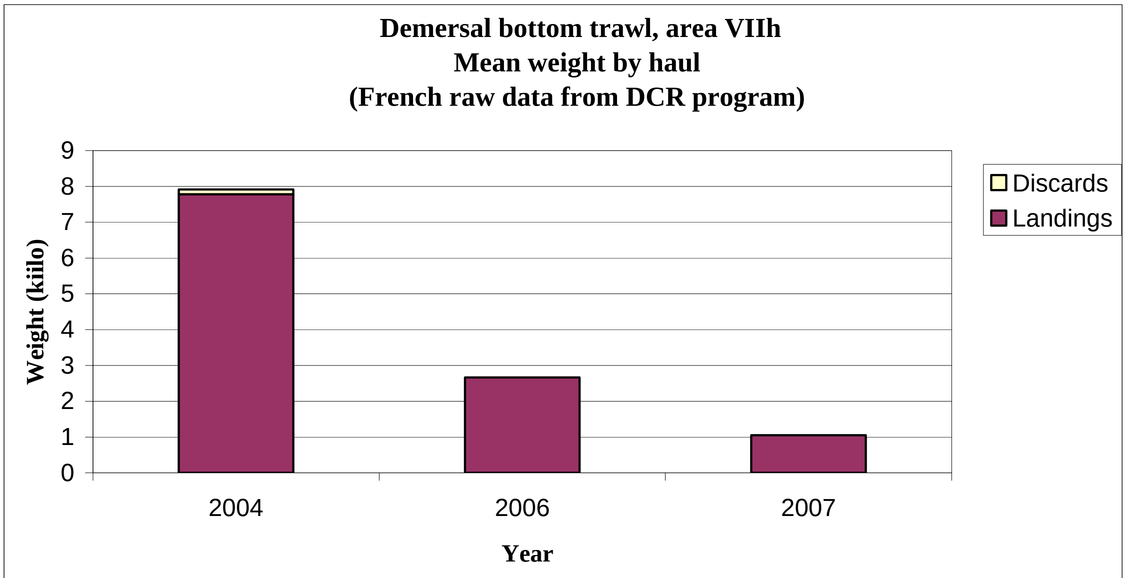
Year	2004	2005	2006
Haul number	56	63	125



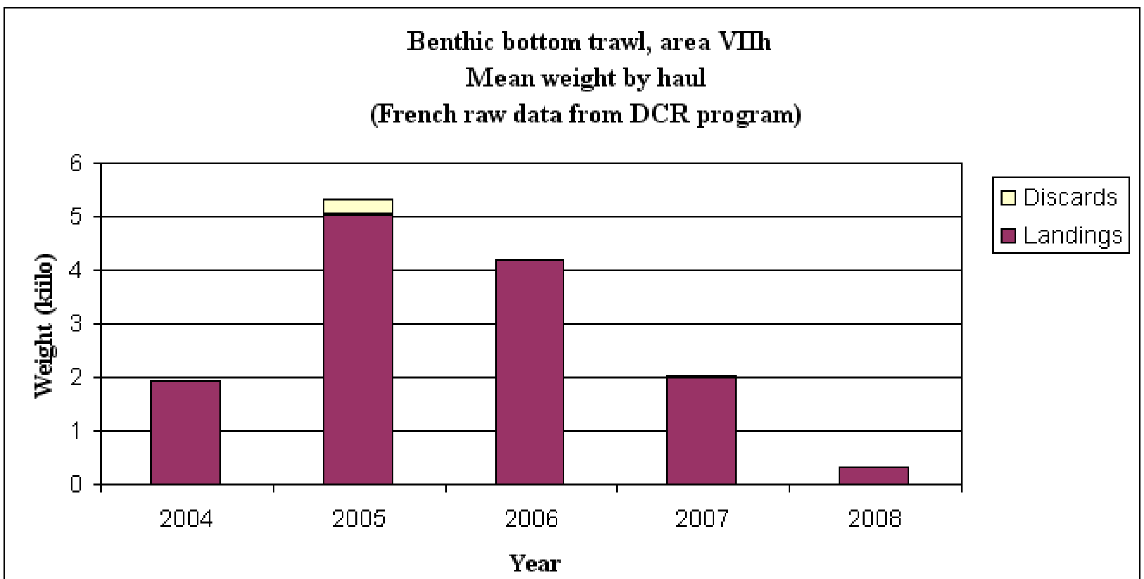
Year	2005	2006
Haul number	100	68



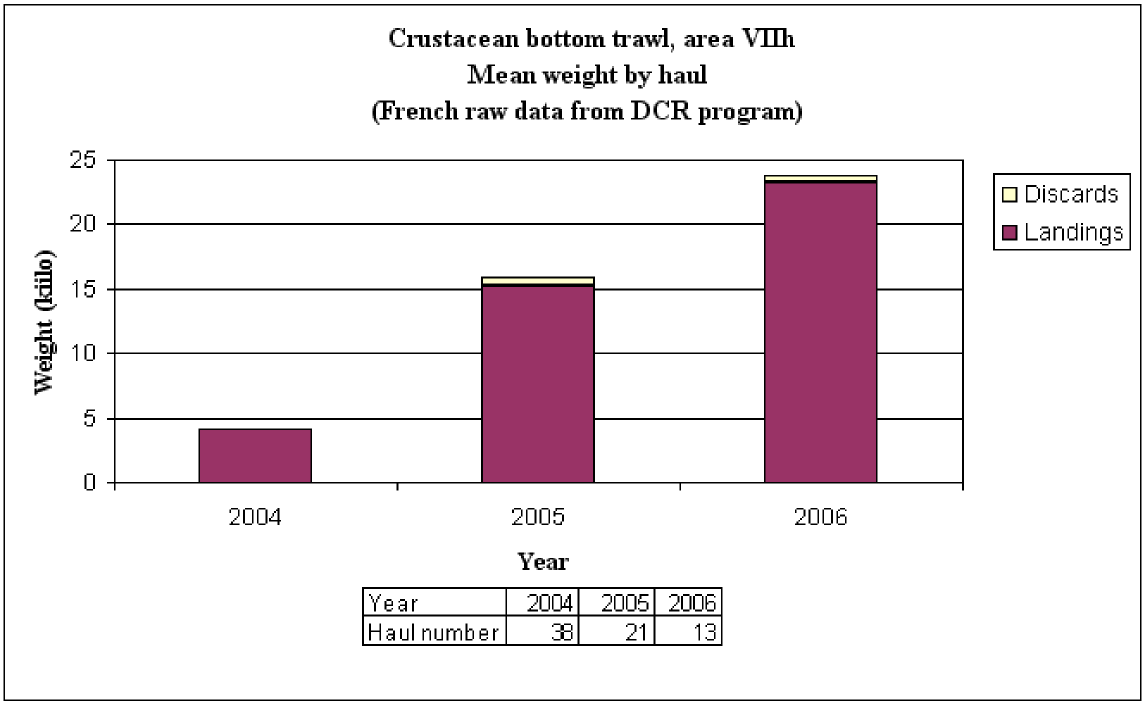
Year	2004	2005	2006	2007	2008
Haul number	20	251	112	41	27



Year	2004	2006	2007
Haul number	17	3	47



Year	2004	2005	2006	2007	2008
Haul number	86	106	86	164	12


Crustacean bottom trawl, area VIIIh
Mean weight by haul
(French raw data from DCR program)
Weight (kilo)
25
20
15
10
5
0
2004
2005
2006
Year
Discards
Landings
Year | 2004 | 2005 | 2006
Haul number | 38 | 21 | 13

Appendix 2: Analysis of the French métiers

a) Methodology

The French log-books available to Ifremer were analyzed on the basis of 'fishing sequences' (i.e. the more detailed information available, which is each single line filled in the log-book).

Depending on the area, the gear used and the species composition, each of these fishing sequences was allocated to a "métier".

The first selection is on the fishing area, the second one on the gear and the third one is on the species composition, according to various thresholds of target species (or group of species) contributing to the total landings from this fishing sequence.

The areas considered are as followed:

- Celtic Sea : ICES sub-area VII except VIIa and VIId
- West of Scotland: ICES sub-areas V and VI
- North Sea: ICES sub-area IV
- Eastern Channel : ICES division VIId

Two types of gears have been considered in this analysis: Bottom trawls and Nets.

The choice of the species (or the group of species) used to discriminate the fishing sequences, and the value of the thresholds used, derive from previous studies and some preliminary trials.

The main species (also called 'target' species) and the thresholds are as follows, depending on the areas and gears:

Area	Gear	Target Species	Thresholds
Celtic Sea	Bottom Trawls	Benthic species (anglerfish, megrim, rays)	20%
		Gadoids	40%
		Nephrops	10%
		Others	
	Nets	Anglerfish	30%
		Hake	30%
		Sole	30%
		Others	

Area	Gear	Target Species	Thresholds
West Scotland	Bottom Trawls	Benthic species (anglerfish, megrim, rays)	20%
		Gadoids (except blue ling)	20%
		Blue ling	20%
		Deep Species (grenadier, deep sharks, blackscabbard fish)	20%
		Others	
	Nets	Anglerfish	30%
		Hake	30%
		Others	

Area	Gear	Target Species	Thresholds
North Sea	Bottom Trawls	Saithe	40%
		Gadoids (except saithe)	30%
		Sole	20%
		Others	
	Nets	Sole	30%
		Gadoids	30%
		Others	

Area	Gear	Target species	Thresholds
Eastern Channel	Bottom Trawls	Gadoids	30%
		Sole	20%
		Others	
	Nets	Sole	30%
		Gadoids	30%
		Others	

The levels of the thresholds could be fixed over the studied period based on previous multivariable analysis, or determined by the effectiveness of the discrimination of the landings of the given species . The final choice always results in a compromise since thresholds set too low cannot discriminate enough, and if too high, the proportion of unclassified fishing sequences is too big.

Ideally, the percentage of each species or group of species should be based on value. However, previous analyses showed that, even in weight, relevant thresholds could be found. As no values information are directly available since 1999, the current analyses are carried out on a weight basis.

b) Results

The results of this classification are presented in Figures 1 and 2, in terms of relative fishing effort of each metier on a gear-area basis and in the species composition within each metier. The latter are provided for the year 2000, but the choice of the year does not really matter to illustrate how this method works and provides somewhat interesting results.

Figure 1 below shows how the total fishing effort (as reported in the log-books) is allocated within each metier in 2000 and 2006.

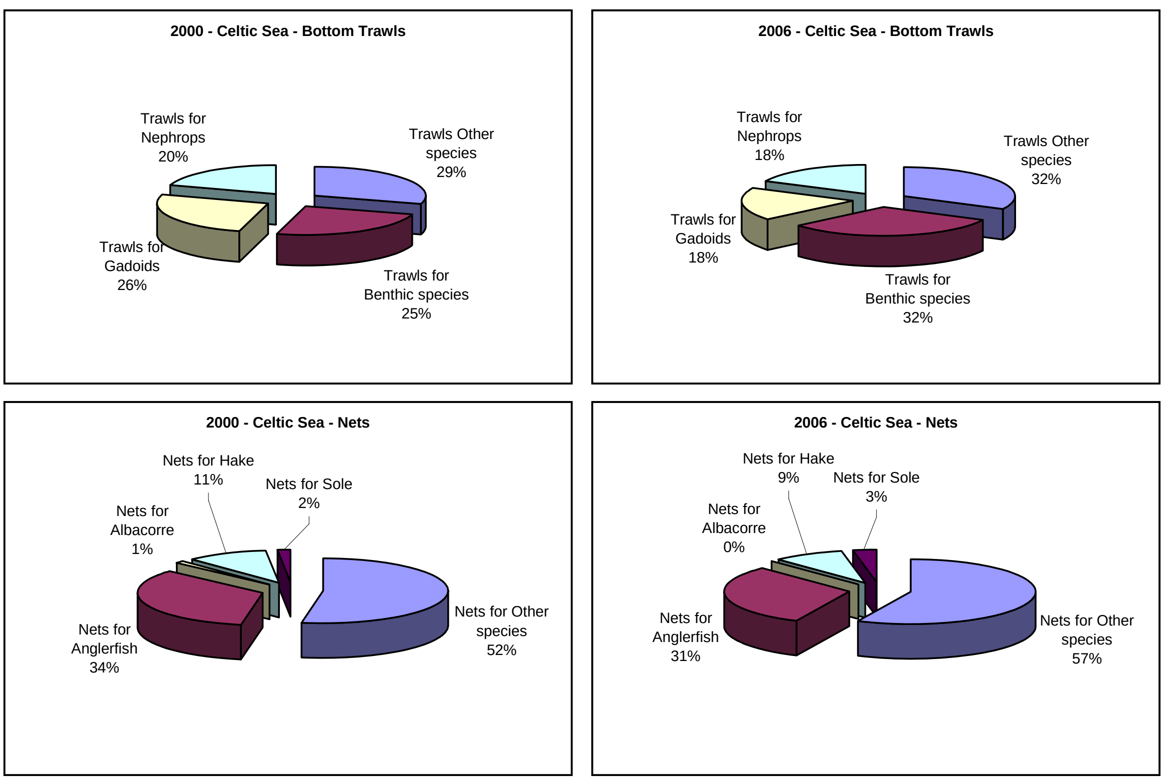
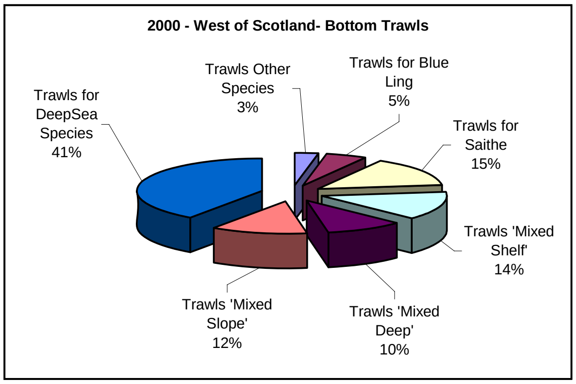
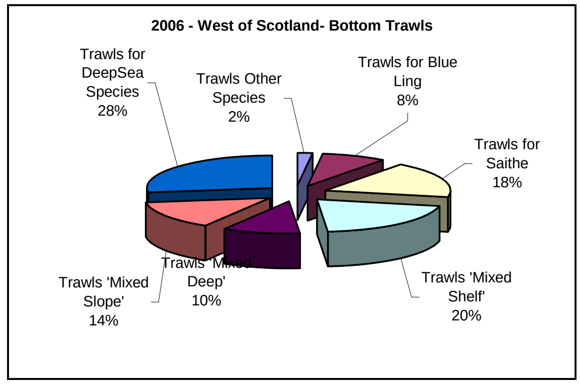
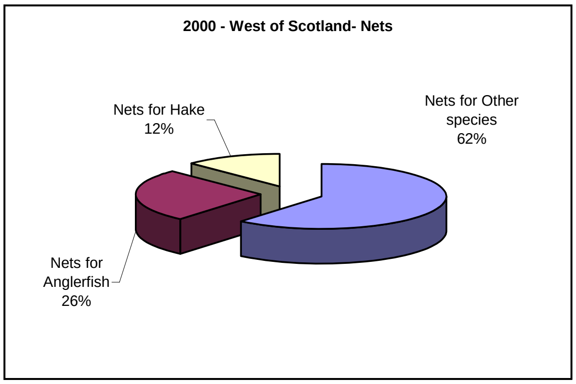


FIGURE 1







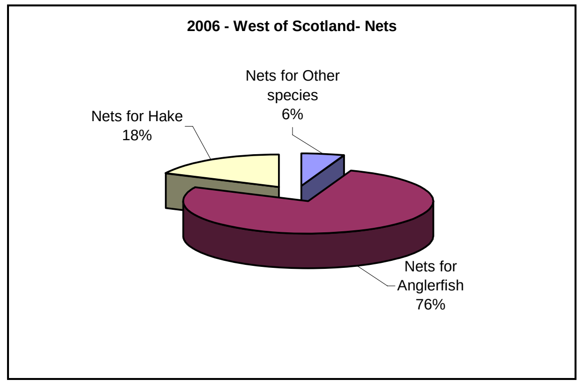
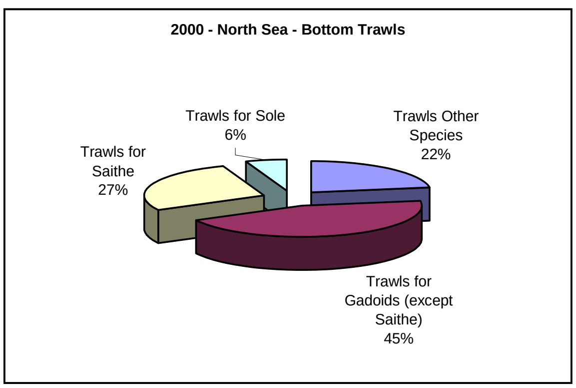
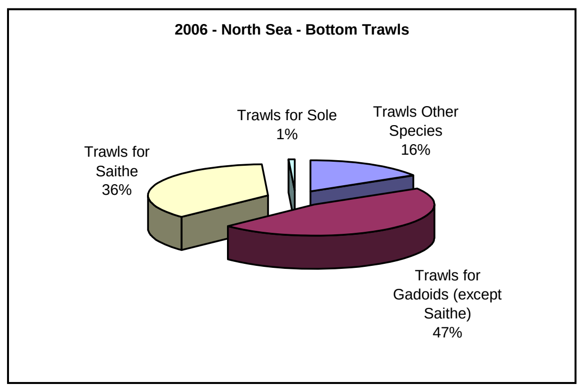
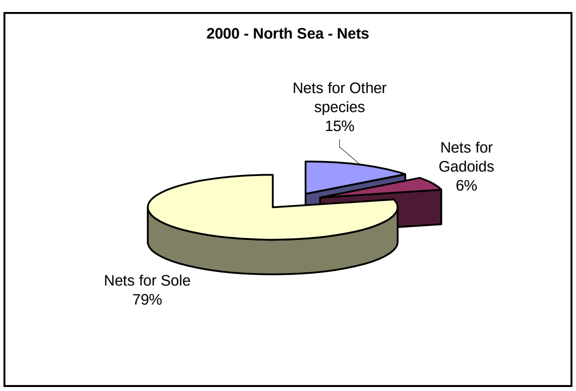


FIGURE 1







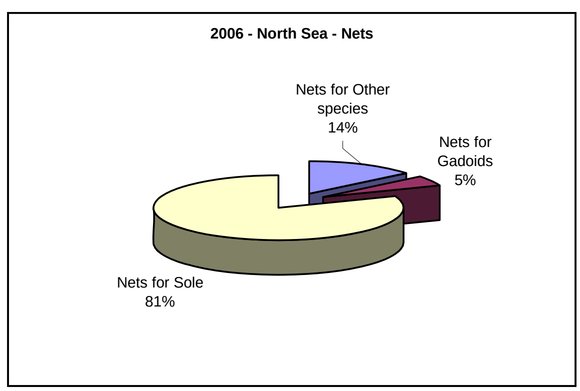


FIGURE 1

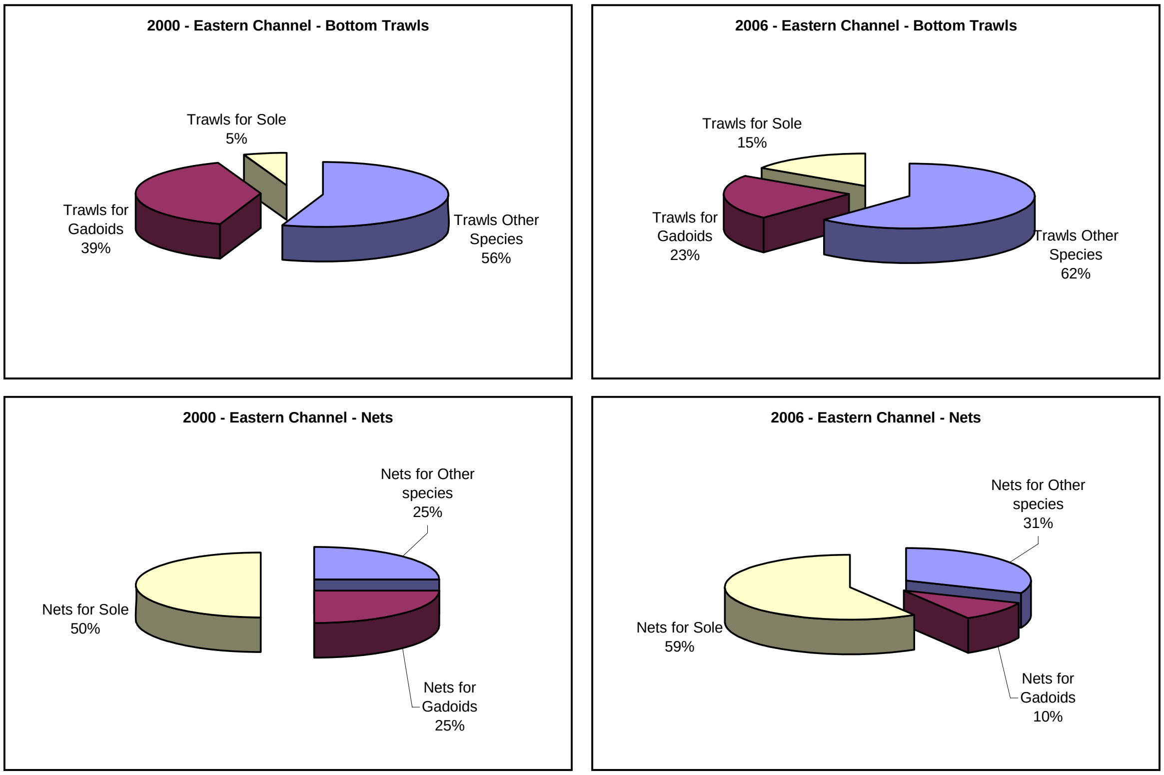
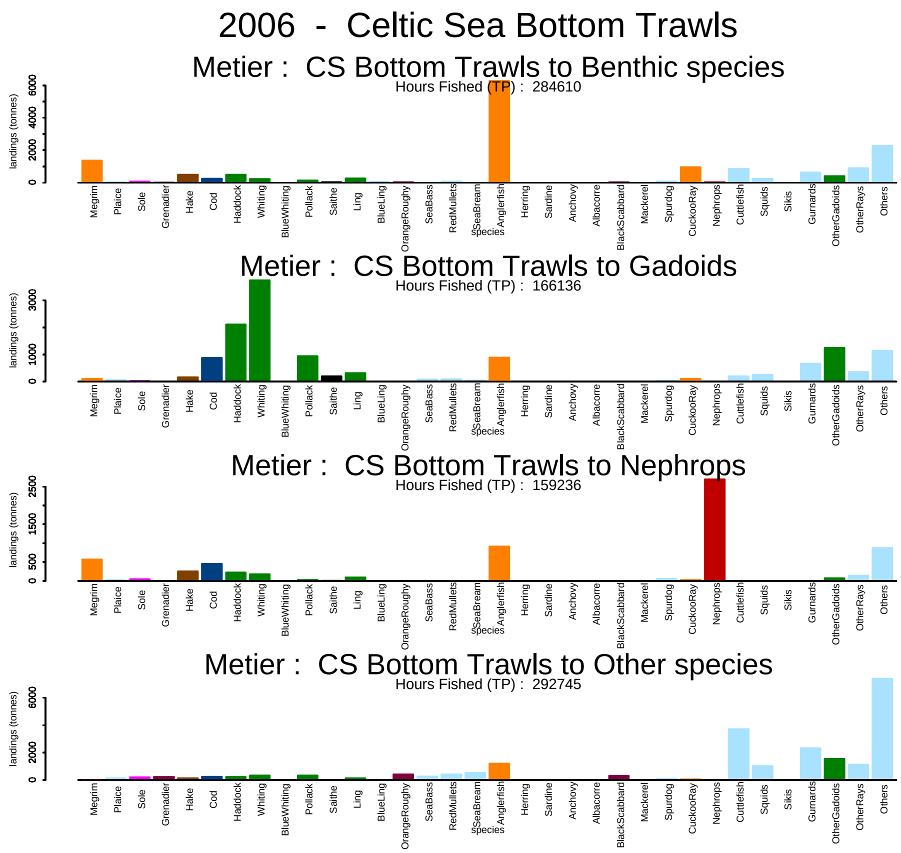
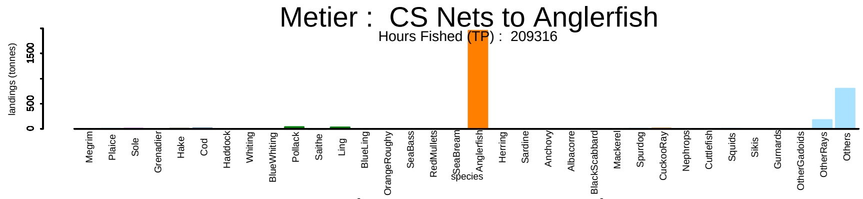

2000 - Eastern Channel - Bottom Trawls
Trawls for Sole 5%
Trawls for Gadoids 39%
Trawls Other Species 56%
2006 - Eastern Channel - Bottom Trawls
Trawls for Sole 15%
Trawls for Gadoids 23%
Trawls Other Species 62%
2000 - Eastern Channel - Nets
Nets for Other species 25%
Nets for Sole 50%
Nets for Gadoids 25%
2006 - Eastern Channel - Nets
Nets for Other species 31%
Nets for Sole 59%
Nets for Gadoids 10%

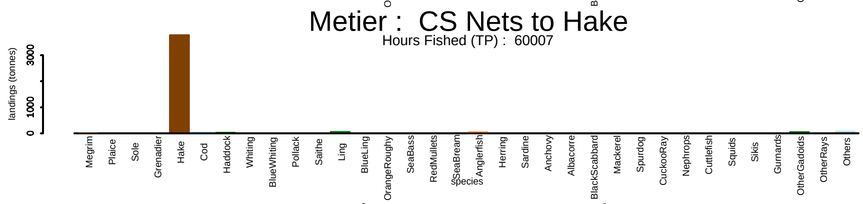
FIGURE1

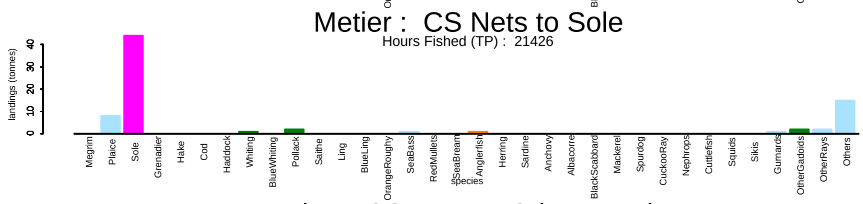
Figure 2 presents the species composition in the landings of each metier for year 2006 as an example.

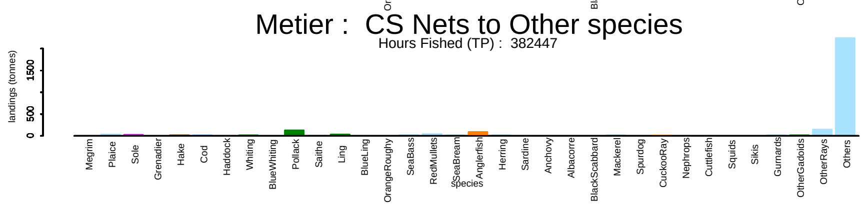


2006 - Celtic Sea Nets

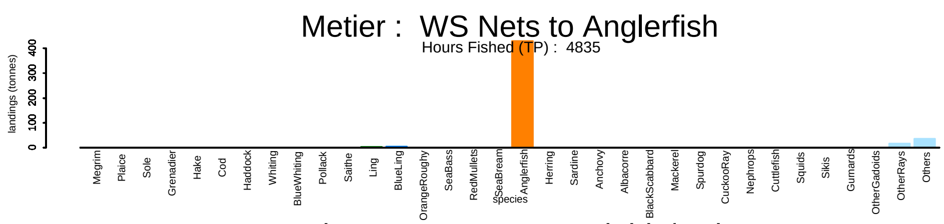


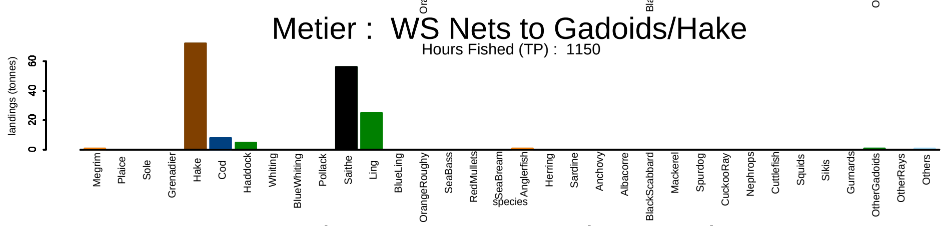


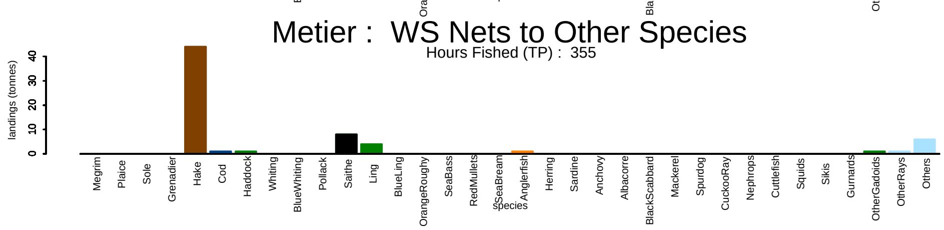




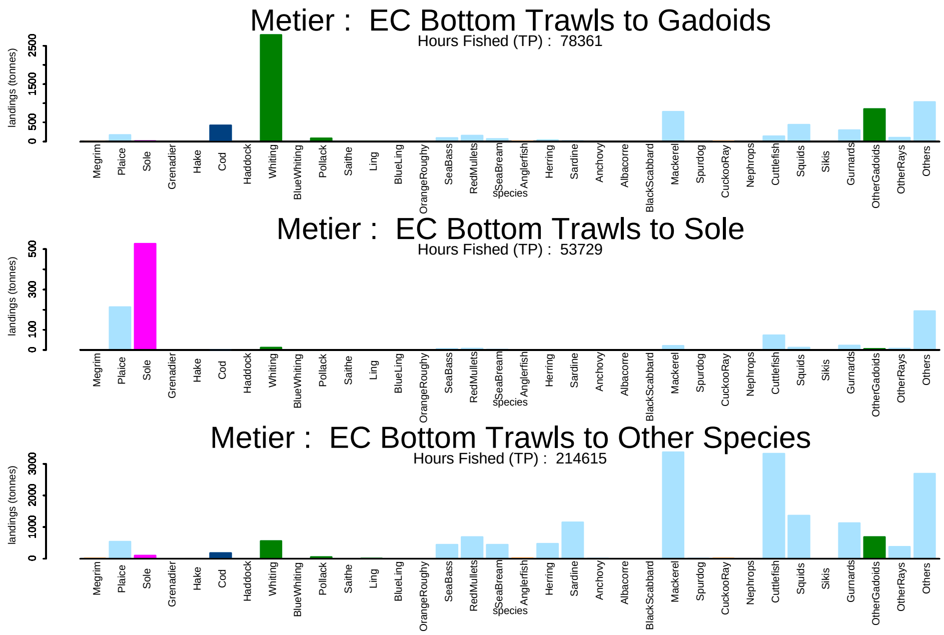
2006 - West of Scotland Nets



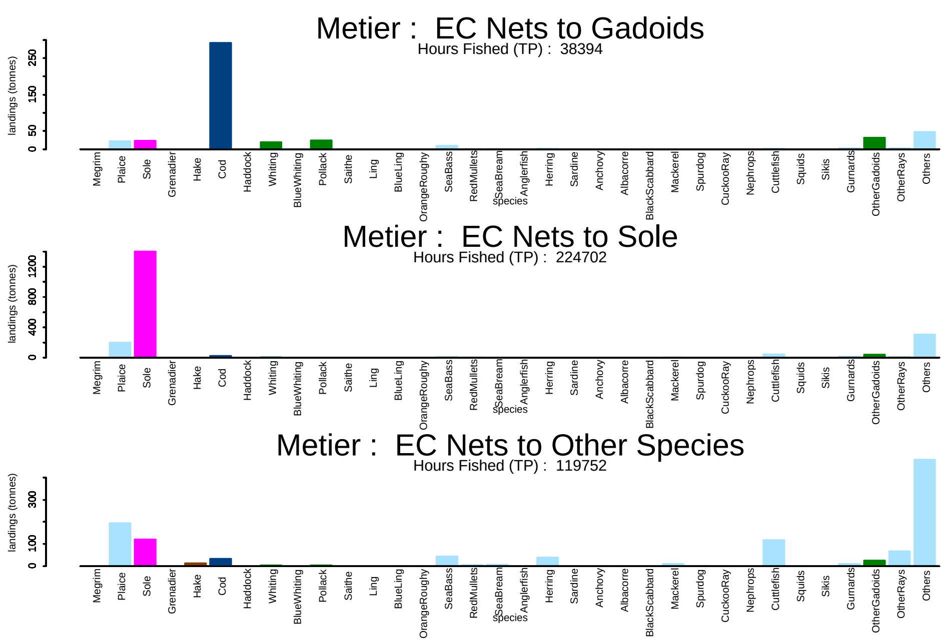




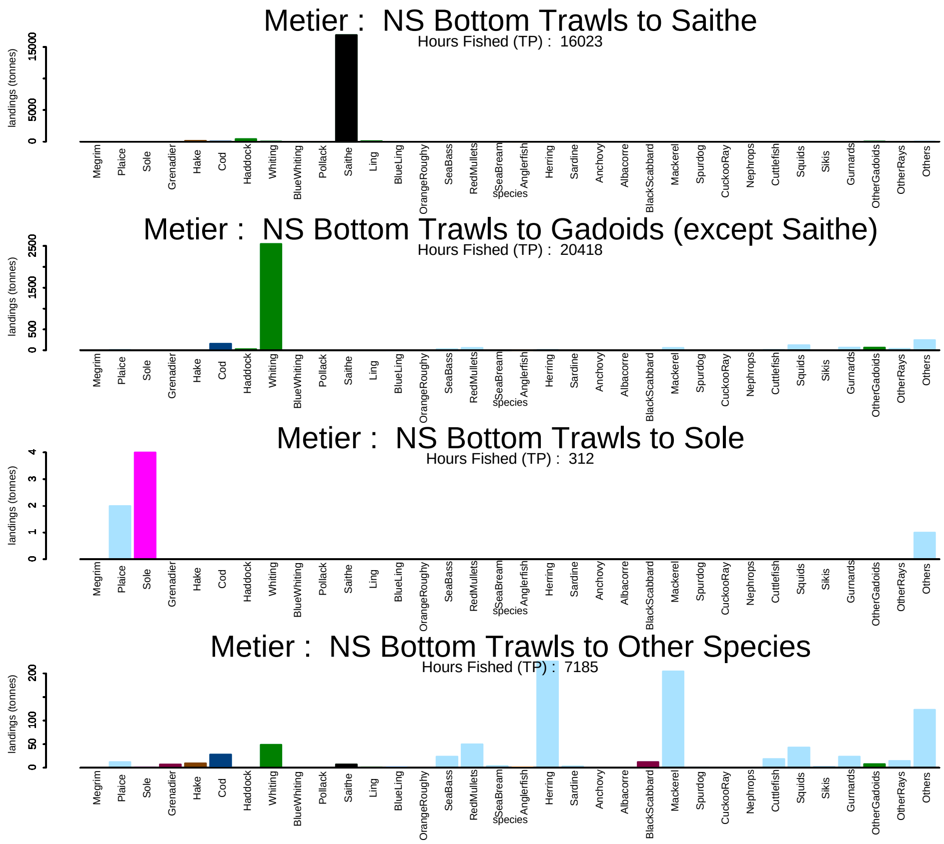
2006 - Eastern Channel Bottom Trawls



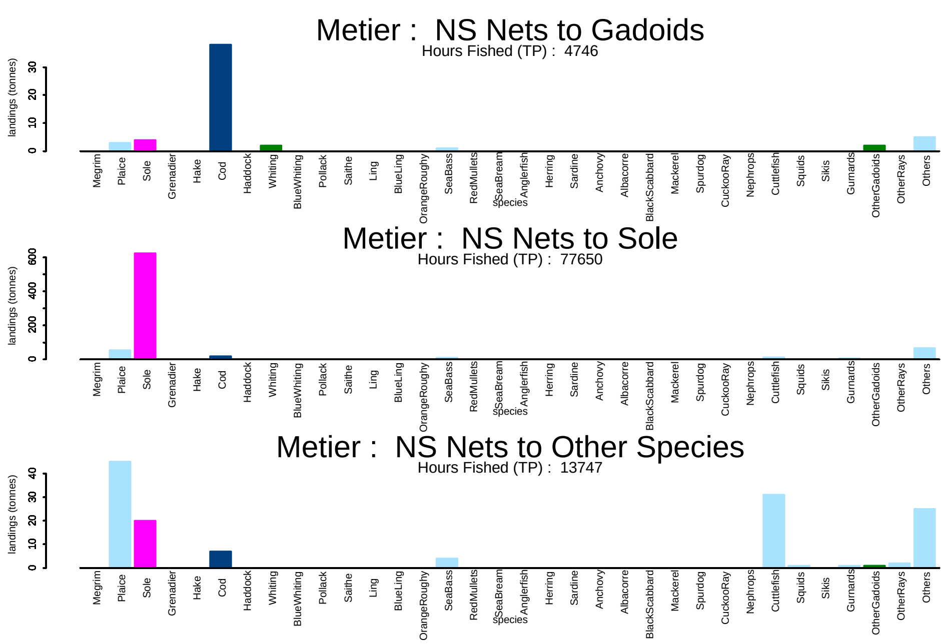
2006 - Eastern Channel Nets



2006 - North Sea Bottom Trawls



2006 - North Sea Nets



It is clear that the relevant target species usually dominate the landings of ‘their’ métier, and that other target species contribute very little to the landings of the given metier. This is the case for cod for which several metiers do not catch any (or very few) cod.

Some mixed metiers still occur, but it is not clear if this mix reflects the actual mixture of species for each haul or if the data resolution could not allow separation of several different hauls during the same day (differences between days and nights in the Nephrops fishery; or between depth within the same rectangle in the deep fishery).

The fishing activity in the North Sea and Eastern Channel that has been classified in the metier ‘Others’ is quite substantial. This is probably due to the rather high thresholds used for the target species. This has to be investigated before drawing firm conclusion from this analysis.

It has to be noted that this classification does not take into account the mesh size. It is assumed that all the bottom trawls operated in the Celtic Sea and in the west of Scotland have mesh greater or equal to 100mm (including Nephrops trawlers). Bottom trawls used in the saithe metier in the North Sea have also mesh greater to 100mm. Trawls in the Eastern Channel and in the North Sea (except in the saithe fishery) are assumed to have mesh size in the range 70-100mm.

Given that a vessel could have several métiers in a same year, it is not possible to provide a precise fleet description (number of vessels and characteristics) in each of the defined métier. Furthermore, the computation was based on the available log-books only. For the fishery in area VI and VII, the available information can be considered as a representative sample of the whole fishery. This is probably not the case in the coastal areas and the information given by the available log-books should be considered as a biased sample (since available information is rather scarce for the smallest boats).

This approach should be considered as a preliminary classification of the French fishing activity. This could be refined in terms of target species and thresholds. However, this analysis shows that a same type of gear in the same area can be used to target different types of species. Therefore, constraints on the activity towards one species should be applied to the relevant metier(s). The definition of the ‘effort groups’ should account for that.

The difficulty in this approach is that this classification is based on *a posteriori* which needs to have accurate information of landings (preferably catches) of each species for each trip.

c) Correspondence between metiers and gear groups + special conditions

Table 1 provides the mean contribution of cod to the total landings of each metier for the years 2000-2007, and the average amount of cod landings. It shows that metiers with significant amount of cod landings are relatively well determined and that some metiers within the same area and using the same gear can be operated without catching (or few) cod.

Table 2 is an attempt to draw correspondence between these metiers and the current gear groups and special conditions as defined in Annex IIa.

Table 1 shows the percentage of cod by metier for the 2000-2007 period, and the average landings of cod over the period.

Métier COD	2000	2001	2002	2003	2004	2005	2006	2007	Average landings (t)
Bottom Trawls in the Celtic Sea to Benthic species	2.9%	4.6%	3.1%	2.1%	1.5%	1.1%	1.5%	1.7%	362
Bottom Trawls in the Celtic Sea to Gadoids species	10.6%	15.2%	20.2%	14.8%	7.9%	5.3%	6.4%	10.5%	2396
Bottom Trawls in the Celtic Sea to Nephrops	9.4%	11.6%	12.1%	11.2%	7.1%	5.5%	6.8%	9.9%	785
Bottom Trawls in the Celtic Sea to Other species	1.9%	2.2%	1.9%	1.4%	0.7%	0.8%	1.1%	1.3%	362
Bottom Trawls in the W Scotland to Saithe	2.1%	3.7%	2.8%	1.7%	1.2%	1.2%	0.8%	1.1%	99
Bottom Trawls in the W Scotland to ‘Mixed species in the shelf’	3.0%	3.4%	5.5%	4.9%	2.2%	1.6%	1.4%	0.9%	44
Bottom Trawls in the W Scotland to Blue ling	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0
Bottom Trawls in the W Scotland to Deep species	0.1%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	5
Bottom Trawls in the W Scotland to ‘Mixed species in the slope	1.2%	2.4%	2.2%	1.6%	0.8%	0.5%	0.5%	0.6%	20
Bottom Trawls in the W Scotland to ‘Mixed species in the deep waters	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	1
Bottom Trawls in the W Scotland to Other species	0.2%	0.7%	0.0%	0.6%	0.4%	0.2%	0.8%	0.0%	1
Bottom Trawls in the North Sea to Saithe	0.5%	0.5%	0.4%	0.3%	0.2%	0.2%	0.3%	0.4%	67
Bottom Trawls in the North Sea to Gadoids (except saithe)	11.2%	6.1%	19.5%	8.8%	5.8%	21.2%	4.6%	7.3%	504
Bottom Trawls in the North Sea to Sole	1.8%	1.6%	2.6%	0.0%	0.0%	0.0%	0.0%	5.9%	1
Bottom Trawls in the North Sea to Other species	4.8%	2.2%	9.0%	1.8%	2.5%	3.3%	3.2%	5.1%	59
Bottom Trawls in the E Channel to Gadoids	10.6%	5.8%	12.1%	5.2%	3.3%	4.6%	5.7%	9.0%	739
Bottom Trawls in the E Channel to Sole	1.7%	0.4%	0.8%	0.3%	0.1%	0.1%	0.2%	0.7%	4
Bottom Trawls in the E Channel to Other species	2.5%	1.4%	2.5%	1.3%	0.8%	1.0%	1.0%	2.2%	249
Nets in the Celtic Sea to Anglerfish	0.5%	0.4%	0.4%	0.4%	0.3%	0.2%	0.3%	0.2%	10
Nets in the Celtic Sea to Hake	0.1%	0.8%	0.9%	0.4%	0.2%	0.5%	0.5%	1.1%	24
Nets in the Celtic Sea to Sole	0.0%	0.0%	0.0%	0.0%	0.0%	0.8%	0.0%	0.0%	0
Nets in the Celtic Sea to Other species	0.5%	0.5%	0.5%	0.6%	0.2%	0.2%	0.3%	0.3%	11
Nets in the W Scotland to Anglerfish	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0

Nets in the W Scotland to ‘Hake’	9.2%	0.4%	17.1%	6.9%	0.0%	9.6%	4.7%	1.5%	12
Nets in the W Scotland to Other species (deep sharks)	0.0%	0.1%	0.0%	0.0%	1.0%	2.1%	1.5%	0.8%	1
Nets in the North Sea to Sole	6.4%	4.6%	4.2%	4.6%	1.9%	1.1%	2.4%	4.1%	28
Nets in the North Sea to Gadoids	64.1%	22.1%	71.7%	63.2%	54.3%	37.5%	69.1%	64.9%	74
Nets in the North Sea to Other species	7.8%	5.3%	11.7%	17.4%	4.9%	3.5%	5.1%	8.0%	14
Nets in the E Channel to Sole	4.9%	3.1%	2.8%	3.8%	1.4%	1.0%	1.2%	2.4%	52
Nets in the E Channel to Gadoids	71.2%	65.7%	63.2%	65.0%	51.0%	51.5%	60.2%	60.7%	392
Nets in the E Channel to Other species	5.6%	4.2%	3.2%	6.0%	2.3%	1.9%	2.8%	3.5%	48

Table 2 shows the assumed correspondence between the metiers and the gear group and special conditions of Annex IIa.

Métier	Gear	Mesh size	Gear group	Special Condition
Bottom Trawls in the Celtic Sea to Benthic species	TD	100	nd	nd
Bottom Trawls in the Celtic Sea to Gadoids species	TD	100	nd	nd
Bottom Trawls in the Celtic Sea to Nephrops	TD	100	nd	nd
Bottom Trawls in the Celtic Sea to Other species	TD	?	nd	nd
Bottom Trawls in the W Scotland to Saithe	TD	100	4.a.iv	8.1.(d)
Bottom Trawls in the W Scotland to 'Mixed species in the shelf'	TD	100	4.a.iv	?
Bottom Trawls in the W Scotland to Blue ling	TD	100	4.a.iv	8.1.(d)
Bottom Trawls in the W Scotland to Deep species	TD	100	4.a.iv	8.1.(d)
Bottom Trawls in the W Scotland to 'Mixed species in the slope	TD	100	4.a.iv	8.1.(d)
Bottom Trawls in the W Scotland to 'Mixed species in the deep waters'	TD	100	4.a.iv	8.1.(d)
Bottom Trawls in the W Scotland to Other species	TD	100	4.a.iv	8.1.(d)
Bottom Trawls in the North Sea to Saithe	TD	110	4.a.iv	8.1.(d)
Bottom Trawls in the North Sea to Gadoids (except saithe)		70-89	4.a.ii	no
	TD	90-99	4.a.iii	no
Bottom Trawls in the North Sea to Sole	TD	70-89	4.a.ii	8.1.(c)
Bottom Trawls in the North Sea to Other species	TD	70-89	4.a.ii	no
Bottom Trawls in the E Channel to Gadoids		70-89	4.a.ii	no
	TD	90-99	4.a.iii	no
Bottom Trawls in the E Channel to Sole	TD	70-89	4.a.ii	8.1.(c)
Bottom Trawls in the E Channel to Other species	TD	70-89	4.a.ii	8.1.(c)
Nets in the Celtic Sea to Anglerfish	GE	>220	nd	nd
Nets in the Celtic Sea to Hake	GE	110	nd	nd
Nets in the Celtic Sea to Sole	GE	100	nd	nd
Nets in the Celtic Sea to Other species	GE	?	nd	nd

Nets in the W Scotland to Anglerfish	GE	>220	4.c.iv	8.1.(f)
Nets in the W Scotland to 'Hake'	GE	110	4.c.ii	no
Nets in the W Scotland to Other species (deep sharks)	GE	160	4.c.iii	no
Nets in the North Sea to Sole	TR	90	4.d	no / 8.1.(g)
Nets in the North Sea to Gadoids	GE	120	4.c.ii	no
Nets in the North Sea to Other species	GE		4.c.i	no / 8.1.(g)
	TR	100	4d	no / 8.1.(g)
Nets in the E Channel to Sole	TR	90	4.d	no / 8.1.(g)
Nets in the E Channel to Gadoids	GE	120	4.c.ii	no
Nets in the E Channel to Other species	GE		4.c.i	no / 8.1.(g)
	TR	100	4d	no / 8.1.(g)

Appendix 3: Summary of Spanish effort data (kwdays) in ICES VIa by gear type and mesh size.

Nominal Effort			Year				
DIVISION	GEAR	MESH SIZE	2003	2004	2005	2006	2007
VIa	GILL	110-149					38253.075
		none			29.4		3226.65
	Total GILL				29.4		41479.725
	LONGLINE	none	520520.385	542586.555	1020727.58	1611938.06	1072215.8
	Total LONGLINE		520520.385	542586.555	1020727.58	1611938.06	1072215.8
	OTTER	100-119	337769.25	149205	109772.25	61409.25	245431.2
		32-54	156.555				
		70-79	588				
		80-89	459.375				
		none	28642.95	103411.56	105250.53	259562.31	60000.99
	Total OTTER		367616.13	252616.56	215022.78	320971.56	305432.19
	none	none	7567.56	4602.57	4042.5		5350.8
	Total none		7567.56	4602.57	4042.5		5350.8
Total VIa			895704.075	799805.685	1239822.26	1932909.62	1424478.51

Appendix 4: SGRST-08-01 AND SGRST-08-03 PARTICIPANTS LIST

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ANNEX EXPERT DECLARATIONS

Declarations of invited experts are published on the STECF web site on https://stecf.jrc.ec.europa.eu/home together with the final report.

European Commission

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Author(s): Bailey N., Vanhee W., Davie S., Holmes S., Reeves S., Vinther M., Munch-Petersen S., Coppin F., Biseau A., Verin Y., Lövgren J., Valentinsson D., Röckmann C., González Herraiz I. & Rätz H.-J.

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Abstract

SGRST-08-03 was held during 1–5 September 2008 in Lysekil, Sweden. A draft report was prepared by SGRST-08-01 during 2-6 June 2008 in Ispra, Italy. The meeting was convened to focus on fleet specific catch (including discards) and effort data in order to evaluate fishing effort regulations enforced since 2003 in order to support multi-annual recovery and management plans. Data were officially called by the European Commission, and the data call was served by the JRC. STECF reviewed the report during its plenary meeting during 3-7 November 2008.

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